Fungal Biology and Ecology

(College of Agricultural and Environmental Sciences)

The minor in Fungal Biology and Ecology is open to all students interested in a concentrated exposure to fungi and useful microorganisms. The minor is sponsored by the Plant Pathology Group Office.

Minor Program Requirements:

**UNITS**

Fungal Biology and Ecology........... 18-20

- Plant Pathology 130, 148, 150............ 10
- Select 7-9 units from Food Science and Technology 104, Plant Pathology 40, 135, 185, Science and Society 30, Soil Science 111; Plant Pathology 224 (available to advanced students with consent of instructor)................................. 7-9

Minor Adviser. T. Gordon

Genetics

See Molecular and Cellular Biology, on page 430; and Integrative Genetics and Genomics (A Graduate Group), on page 352.

Geographic Information Systems

(College of Agricultural and Environmental Sciences)

The Department of Biological and Agricultural Engineering offers a minor in Geographic Information Systems with an emphasis on spatial analysis. This minor is ideal for students interested in information processing of spatial data related to remote sensing, land information systems, marine cartography, thematic mapping, surface modeling, environmental modeling resources management, public utility planning, emergency response, geospatial analysis, and computer-assisted design. Prerequisites include Mathematics 16A-16B, Statistics 13 or Plant Sciences 120 or Civil and Environmental Engineering 114, and Plant Sciences 21 or Computer Science Engineering 15.

Minor Program Requirements:

**UNITS**

Geographic Information Systems........ 18

- Applied Biological Systems Technology/Landscape Architecture 150
- Applied Biological Systems Technology 181N or 182, Environmental Science & Management 186, 186L .................................................................................................................. 13
- Select five or more units from: Applied Biological Systems Technology/Hydrologic Science 181N or 182 Environmental Science & Management 108, 185 Environmental Science and Policy 168A, 168B, 171, 179 ................................................. 5

Minor Adviser. S. K. Upadhyaya and S.G. Vougioskas (Biological and Agricultural Engineering Department)

Geographic Studies

(College of Agricultural and Environmental Sciences)

The interdepartmental minor in Geographic Studies is defined by freshmen with place. Geographers strive to answer spatial questions regarding the earth’s surface; to describe and explain the character of regions; to ascertain the ways in which historical and contemporary humans have used and shaped the earth’s surface; and to understand the interactions of physical, biotic, and human systems within our global environment. The minor is compatible with a variety of environmental majors in the college and also with graduate programs in geography.

The minor is sponsored by the Department of Environmental Design.

Geography

See Geography (A Graduate Group), below.

Geography

(A Graduate Group)

Chris Benner, Ph.D., Chairperson of the Group

Group Office. Carrie Armstrong-Roport, Student Affairs Officer, 133 Hunt Hall 530.752.4119; caraport@ucdavis.edu

http://geography.ucdavis.edu

Faculty

Gwen Arnold, Ph.D., Assistant Professor (Environmental Science and Policy)

Chris Benner, Ph.D., Associate Professor (Human Ecology)

Stephen Boucher, Ph.D, Associate Professor (Agricultural and Resource Economics)

Mary Cadenaosou, Ph.D, Associate Professor (Plant Sciences)

Diana Davis, Ph.D, Associate Professor (History)

Adela de la Torre, Ph.D., Professor (Chicana/o Studies)

Natalia Deeb-Sossa, Ph.D., Associate Professor (Chicana/o Studies)

Patsy Ekubans Obwens, M.L.A., Professor and Chair (Human Ecology)

Ryan Galt, Ph.D., Associate Professor (Human Ecology)

Steven Greco, Ph.D., Associate Professor (Human Ecology)

Luis Guarniero, Ph.D, Professor (Human Ecology)

Erin Hamilton, Ph.D., Assistant Professor (Sociology)

Susan Handy, Ph.D., Professor (Environmental Science and Policy)

Andrew Hargadon, Ph.D., Professor and Chair (Graduate School of Management)

Lynette Hart, Ph.D., Professor (Population Health and Reproduction)

Robert Hijmans, Ph.D, Associate Professor (Environmental Science and Policy)

Frank Hirtz, L.L.D., Ph.D., Sr. Lecturer SOE (Human Ecology)

Suad Joseph, Ph.D., Professor (Anthropology)

Carl Keen, Ph.D., Professor (Nutrition)

Martin Kenney, Ph.D., Professor (Environmental Science and Policy)

Jonathan London, Ph.D, Assistant Professor (Human Ecology)

Jeff D. Loux, Ph.D., Assistant Adjunct Professor (Human Ecology)

Fungal Biology and Ecology

Mark Lubell, Ph.D., Professor (Environmental Science and Policy)

Jay R. Lund, Ph.D., Professor (Civil and Environmental Engineering)

Amina Mama, Ph.D., Professor (Women and Gender Studies)

Beth Rose-Middleton, Ph.D., Assistant Professor (Native American Studies)

Brett Milligan, Ph.D., Assistant Professor (Human Ecology)

Peter B. Moyle, Ph.D., Professor (Wildlife, Fish and Conservation Biology)

N. Claire Napawan, M.L.A., Assistant Professor (Human Ecology)

Bethania Ngwenyama, Ph.D., Associate Professor (African American and African Studies Program)

Deb Niemeier, Ph.D., Professor (Civil and Environmental Engineering)

James Quinn, Ph.D., Professor (Environmental Science and Policy)

Michael Rios, Ph.D., Associate Professor (Human Ecology)

Lynn Keller, Ph.D., Professor (Classics, Art History)

Margaret Rucker, Ph.D., Professor (Textiles and Clothing)

Mark Schwartz, Ph.D., Professor (Environmental Science and Policy)

Art Shapiro, Ph.D., Professor (Evolution and Ecology)

Janet Shibamoto-Smith, Ph.D., Professor (Anthropology)

Aaron Smith, Ph.D., Associate Professor (Agricultural and Resource Economics)

Daniel Summer, Ph.D., Professor (Agricultural and Resource Economics)

Julie Sze, Ph.D., Associate Professor (American Studies)

Thomas P. Tamitch, Ph.D., Professor (Human Ecology)

Susan Ustin, Ph.D., Professor (Land, Air and Water Resources)

M. Anne Visser, Ph.D., Assistant Professor (Human Ecology)

Charles Walker, Ph.D., Associate Professor (History)

Wesley W. Wallender, Ph.D., Professor (Land, Air and Water Resources) Academic Senate Distinguished Teaching Award

Karen Watson-Gegeo, Ph.D., Professor (School of Education)

Stephen Wheeler, Ph.D., Associate Professor (Plant Sciences)

Diane Wolf, Ph.D., Professor (Sociology)

Truman Young, Ph.D., Professor (Plant Sciences)

Minhui Zhang, Ph.D., Professor (Land and Water Resources)

Emeriti Faculty

Michael Barbour, Ph.D., Professor Emeritus (Plant Sciences)

David Boyd, Ph.D., Associate Professor Emeritus (Anthropology)

Cynthia Brown, Ph.D, Professor Emeritus (History)

Stephen Brush, Ph.D., Professor Emeritus (Human Ecology)

Thomas A. Cahill, Ph.D., Professor Emeritus (Human Ecology)

Karen Cheng, Ph.D., Associate Professor Emeritus (History)

Deborah Elliott-Fish, Ph.D., Sr. Lecturer, SOE Emeritus (Wildlife, Fish and Conservation Biology)

Joan Flesheim, Ph.D., Associate Research Scientist, Emeritus (Geology)

Mark Francis, M.L.A., Professor Emeritus (Human Ecology)

Isao Fujimoto, Ph.D., Sr. Lecturer SOE Emeritus (Human Ecology)

Joan Florsheim, Ph.D., Associate Research Scientist, Emeritus (Geography)

Joan Florsheim, Ph.D., Associate Research Scientist, Emeritus (Geography)

Deborah Elliott-Fish, Ph.D., Sr. Lecturer, SOE Emeritus (Wildlife, Fish and Conservation Biology)

Joan Flesheim, Ph.D., Associate Research Scientist, Emeritus (Geology)

Mark Francis, M.L.A., Professor Emeritus (Human Ecology)

Isao Fujimoto, Ph.D., Sr. Lecturer SOE Emeritus (Human Ecology)

James Quinn, Ph.D., Professor Emeritus (Environmental Science and Policy) Distinguished Graduate Mentoring Award

James Grieshop, Ph.D., Specialist in Cooperative Extension Emeritus (Human Ecology)

Louis Grietens, Ph.D., Professor Emeritus (Nutrition)

Joyce Gutstein, Ph.D., Director, Emeritus (Public Service Research Program)

Richard Howitt, Ph.D., Professor Emeritus (Agricultural and Resource Economics)

Quarter Offered: I-Fall, II-Winter, III-Spring, IV-Summer; 2015-2016 offering in parentheses.

Pre-Fall 2011 General Education (GE): A - Humanities; B - Social Sciences; C - Natural Sciences; D - Quantitative Skills; E - Scientific Skills; F - General Education; G - Oral Communication; H - Written Communication; I - Creative Arts; J - 20th Century; K - California Studies; L - Upper Division; M - Lower Division; N - Work Experience; O - American Cultures; P - Scientific; Q - Visual; R - Domestic Diversity; S - Lower Division GE; T - Upper Division GE; U - Writing Experience; V - Lower Division GE; W - Upper Division GE; X - Transfer Course; Y - Lower Division GE; Z - Upper Division GE.

Fall 2011 and on Revised General Education (GE): A - Humanities; B - Social Sciences; C - Science and Engineering; D - Oral Skills; E - Quantitative; F - Scientific; G - Visual; H - World Cultures; I - Writing Experience.

ACGH=American Cultures, DD=Domestic Diversity, OL=Oral Skills, OQ=Quantitative, SL=Scientific, VL=Visual, WE=World Cultures, WE=Writing Experience.
322 Geography (A Graduate Group)

Nguyen Kien, Ph.D., Professor Emeritus
(Arthritis)
F. Thomas Just, Ph.D., Adjunct Professor Emeritus
(Plant Sciences)
Dean MacCannell, Ph.D., Professor Emeritus
(Human Ecology)
Heath Momsen, Ph.D., Professor Emeritus
(Human Ecology)
E. Steve McNeil, M.L.A., Sr. Lecturer, SOE Emeritus
(Landscape Architecture)
Jay Meichling, Ph.D., Professor Emeritus
(American Studies)
Patricia Mokhtarian, Ph.D., Professor Emeritus
(Civil and Environmental Engineering)
Janet Momsen, Ph.D., Professor Emeritus
(Enronomics and Science Policy)
Richard Plant, Ph.D., Professor Emeritus
(Plant Sciences)
David Robertson, Ph.D., Professor Emeritus (English)
Michael P. Smith, Ph.D., Professor Emeritus
(Human Ecology)
Margaret Stawn, Ph.D., Associate Adjunct Professor, Emeritus (Women and Gender Studies)
Robert L. Thayer, Jr., M.A., Professor Emeritus
(Human Ecology)
Stefano Varese, Ph.D., Professor Emeritus
(Native American Studies)
Geoffrey Wandaforde-Smith, Ph.D., Associate Professor Emeritus
Miriam J. Wells, Ph.D., Professor Emeritus (Human Ecology)

Affiliated Faculty
Dave C. Campbell, Ph.D., Specialist in Cooperative Extension (Human Ecology)
Joyce Gubser, Ph.D., Director (Public Service Research Program)(MIE)
Eric Larsen, Ph.D., Associate Research Scientist (Human Ecology)
Greg McPherson, Ph.D., Lecturer and Associate in the Agricultural Experiment Station
Lorence Oki, Ph.D, Associate Specialist in Cooperative Extension (Plant Sciences and Human Ecology)
Hugh Safford, Ph.D., Regional Ecologist/Lecturer WOS (Environmental Science and Policy)
Keneth Tate, Ph.D, Specialist in Cooperative Extension (Plant Sciences)
James Thorne, Ph.D. Research Scientist (Environmental Science and Policy)
Joshua Viers, Ph.D. Associate Research Scientist (John Muir Institute of the Environment)

Graduate Study. The Graduate Group in Geography (GGG) offers programs of study and research leading to the M.A. and Ph.D. degrees. Faculty and students share a common interest in spatial interaction between humans and the biophysical environment. The wide faculty interests attract a diverse set of students in such areas as biogeography, urban forestry and related natural science and engineering fields, as well as human geography and related social science fields. A number of faculty members use and teach geographic information systems, remote sensing, and related geographic techniques, and many have a geographic orientation. The strengths of the Davis campus and its faculty enable the program to focus on important issues including people, place and power, community and regional identity, environmental interaction, agricultural sustainability, landscape architecture, environmental change, biogeography, natural resource management, and technological innovations in computing and use of geographic information systems. Students are mentored by faculty across the many colleges of the university.

Preparation. Most students considered for admission will have an undergraduate major in geography or a closely related field. Generally, a student without an undergraduate degree in geography will be required to complete the equivalent of a minor in geography, consisting of one course each in human geography, physical geography and geographic methods, plus any additional undergraduate course work required as background for the student’s research emphasis as determined by the student’s guidance committee.

Graduate Advisers. Chris Bemner (Human Ecology), Ryan Galt (Human Ecology), Robert Hijmans (Environmental Science and Policy) and James Quinn (Environmental Science and Policy)

Courses in Geography (GEO)

Graduate
200AN. Geographical Concepts (4)
Lecture/discussion—4 hours; term paper. Prerequisite: graduate standing. Required: graduate standing. Class size limited to 20. Development, application, and philosophical background of the discipline in geography and geographical knowledge production. Similarities and differences in theories employed in physical and human geography. Cartography. Geographic contributions to interdisciplinary theory, including biogeosciences, social sciences, and humanities. 200BN. Theory & Practice of Geography (4)
Lecture/discussion—4 hours. Prerequisite: graduate standing. Class size limited to 20. Development, application, and philosophical background of the discipline in geography and geographical knowledge production. Similarities and differences in theories employed in physical and human geography. Cartography. Geographic contributions to interdisciplinary theory, including biogeosciences, social sciences, and humanities. 200CN. Quantitative Geography (4)
Lecture—4 hours; laboratory—6 hours. Class size limited to 25. Provides an overview of quantitative approaches in spatial data analysis. Overview of different approaches used for inference, modeling, and prediction. Also learn how to write computer programs to implement these methods. 200DN. Socio-Spatial Analysis in Geography (4)
Lecture/discussion—4 hours. Class size limited to 25. Introduction to methodologies of socio-spatial analysis in interviews, and ethnographic fieldwork. Students develop a critical understanding of different methodological and theoretical approaches, and their appropriate applications in overall research design. 200E. Advanced Research Design in Geography (2)
Lecture/discussion—2 hours. Prerequisite: graduate standing; courses 200AN, 200BN, 200CN and 200DN. Class size limited to 15. Helps Ph.D. students develop their research question, design their research plan and complete a full dissertation research proposal. 201. Sources and General Literature of Geography (4)
Discussion—4 hours. Prerequisite: graduate standing in geography, consent of instructor. Designed for students preparing for graduate work. Discussion of the physical

212. Water Resource Management (3)
Lecture—3 hours. Prerequisite: Civil and Environmental Engineering 114, 114, and 142; Civil and Environmental Engineering 133 recommended. Examination of institutional, economic, and social basis for managing local and regional water resources. Examples in the context of California’s water development and management. Uses of computer modeling to improve water management. 213. Environmental Science and Policy (3)
Lecture—1 hour (I.) Modlin
214. Seminar in Geographical Theory II (3)
Lecture—2 hours. Prerequisite: Evolution and Ecology 100 or 101 or consent of instructor. Recent developments in theoretical and experimental biogeography, historical biogeography and related themes in systematics, the biology of colonizing species, and related topics. (Same course as Population Biology 296/S/U grading only).—II. (III.) Shapiro
230. Citizenship, Democracy, & Public Space (4)
Lecture—4 hours. Prerequisite: graduate standing or consent of instructor. Introduction to seminal works in political theory, philosophy, and the social sciences that focus on citizenship and the public sphere; development of different approaches to regarding restructing of public space in a pluralistic and global culture; discussion of contemporary case studies. (Same course as Landscape Architecture 190 III. (III.) Rios
233. Physical Planning and Design (4)
Lecture—2 hours, discussion—2 hours. Limited to graduate students. Regulation, design, and development of the built landscape, planning and land development processes, zoning and subdivision regulation, site planning, urban design goals and methods, public participation strategies, creatively designing landscapes to meet community and ecological goals. (Same course as Landscape Architecture 205.) Offered irregularly.—Wheeler
236. Transportation Planning and Policy (4)
Lecture/discussion—4 hours. Limited enrollment. Transportation planning process at the regional level, including the role of Federal Highway Administration regional transportation planning, tools and techniques used in regional transportation planning, issues facing regional transportation planning agencies, and strategies of potential solutions and strategies. Students taking this course previously as Transportation Planning and Policy 289 cannot repeat it for credit. Taking other Transportation Planning and Policy 289 offerings does not preclude taking Transportation Planning and Policy 220 for credit. (Same course as Transportation Planning and Policy 220.) Offered in alternate years.—III. Handy
240. Community Development Theory (4)
Lecture/discussion—4 hours. Introduction to theories of community development and different concepts of community, poverty, and development. Emphasis on building theory, linking applied development technique to theory, evaluating development policy, and examining case studies of community development organizations and projects. (Same course as Community & Regional Development 240.)—I. (I.)
244. Political Ecology of Community Development (4)
Lecture—4 hours. Prerequisite: graduate standing. Community development from the perspective of geographical political ecology. Social and environmental outcomes of the dynamic relationship between communities and land-based resources, and between social groups. Cases of community conservation and development in developing and industrialized countries. (Same course and Community & Regional Development 244.)—II. (II.) Galt
245. The Political Economy of Urban and Regional Development (4)
Lecture—4 hours. Prerequisite: Community and Regional Development 157, 244, or the equivalent. How global, political and economic restructuring and national and state policies are mediated by community politics; social production of urban form; role of the state in uneven development; dynamics of urban growth and decline; regional development in California. (Same course as Community & Regional Development 245.) (III.) (III.)

246. The Political Economy of Transnational Migration (4)
Lecture—4 hours. Prerequisite: graduate standing. Theoretical perspectives and empirical research on social, cultural, political, and economic processes of transnational migration to the U.S. Discussion of conventional theories will precede contemporary comparative perspectives on class, race, ethnicity, citizenship, and the ethnic economy. (Same course as Community & Regional Development 246.)—II. (II.) Guarnizo

248. Social Policy, Welfare Theories and Communities (4)
Seminar—4 hours. Prerequisite: graduate standing. Theories and comparative histories of modern welfare states and social policy in relation to legal/normative, organizational, and administrative aspects. Analysis of specific issues within the U.S. and California context. Not open for credit to students having completed Community & Regional Development 248A and 248B. (Same course as Community & Regional Development 248.) Offered in alternate years. (III.) (III.) Schenker

252. Landscape and Power (4)
Seminar—4 hours. Prerequisite: graduate standing or consent of instructor. How various representations of landscape have historically worked as agents of cultural power. Course framework is interdisciplinary, including studies of landscape representation in literature, art, photography, cartography, cinema, and landscape architecture. (Same course as Landscape Architecture 260.)—I. (I.) Schenker

270. Experimental Design and Analysis (5)
Lecture—3 hours; discussion/laboratory—2 hours. Prerequisite: Plant Sciences 120 or equivalent. Introduction to the research process and statistical methods to plan, conduct and interpret experiments. —II. (II.) Dubovsky

271. Applied Multivariate Modeling in Agricultural and Environmental Sciences (4)
Lecture—3 hours; discussion/laboratory—2 hours. Prerequisite: one of Plant Sciences 120, 205, Statistics 156, 108, or equivalent. Multivariate linear and nonlinear models. Model selection and parameter estimation. Analysis of manipulative and observational agricultural experiments. Discriminant, principal component, and path analyses. Logic and biased regression. Bootstrapping. Exercises based on actual research by UC Davis students.—I. (I.) Loca

279. Discrete Choice Analysis of Travel Demand (4)
Lecture—4 hours. Prerequisite: Civil and Environmental Engineering 114. Behavioral and statistical principles underlying the formulation and estimation of discrete choice models. Practical application of discrete choice models to characterization of choice behavior, hypothesis testing, and forecasting. Emphasis on computer exercises using real-world data sets. (Same course as Civil and Environmental Engineering 254.)—I. (I.)

280. Field Studies in Geography (3)
Lecture—1 hour; fieldwork—6 hours. Prerequisite: undergraduate or graduate coursework in geography and consent of instructor. A topic or subdiscipline of geography will form the theme for the course in any given offering, with a focus on current research on this topic, field methodologies, and data analysis in human and physical geography. May be repeated twice for credit. Limited enrollment.

281. Transportation Survey Methods (4)
Lecture—4 hours. Prerequisite: Statistics 13; Civil and Environmental Engineering 251 recommended. Description of different types of surveys commonly used in transportation demand modeling, including travel and activity diaries, attitudinal, panel, computer, and stated-response surveys. Discussion of sampling, experimental design, and survey design issues. Analysis methods, including factor, discriminant and cluster analysis. Not open for credit to students who have taken Civil and Environmental Engineering 255. (Same course as Transportation Technology and Policy 200.)—II. (II.)

286. Selected Topics in Environmental Remote Sensing (3)
Discussion—2 hours; lecture—1 hour; project. Prerequisite: consent of instructor; Environmental and Resource Sciences 186 or equivalent required; Environmental and Resource Sciences 186 recommended. In depth investigation of advanced topics in remote sensing, image interpretation, measurement, and theory. Not open for credit to students who have taken Civil and Environmental Engineering 255. (Same course as Hydrologic Science 286.) May be repeated for credit. Offered irregularly.–Ustin

290. Seminar in Geography (1-3)
Seminar—1-3 hours. Prerequisite: Graduate standing or consent of instructor. Seminar will focus on selected topical areas within geography, which will vary from quarter to quarter. Students will be expected to present an oral seminar on an aspect of the general topic under discussion. May be repeated six times for credit. (S/U grading only)—I, II, III. (I, II, III.)

291. Seminar in Cultural Geography (4)
Seminar—3 hours.

293. Graduate Internship (1-12)
Prerequisite: consent of instructor. Individually designed, supervised internship, off campus, in community or institutional setting. Developed with advice of faculty member. May be repeated for credit. (S/U grading only)—I, II, III. (I, II, III.)

295. Seminar in Urban Geography (4)
Seminar—3 hours. —II. (II.)

297. Group Graduate in Geography Seminar
Lecture/discussion—1 hour; term paper. Prerequisite: graduate standing. Seminars by UC Davis faculty prominent and nationally and international scholars; research presentations by Graduate Group in Geography Ph.D. candidates. May be repeated for credit. (S/U grading only)–I, II, III. (I, II, III.)

299. Research (1-12)
(S/U grading only)

299. Individual Study (1-12)
Prerequisite: graduate student status in Geography and consent of instructor. (S/U grading only)

Professional

396. Teaching Assistant Training Practicum (1-4)
Prerequisite: graduate standing. May be repeated for credit. (S/U grading only)

Geology

(College of Letters and Science)
The Major Programs

"Civilization exists by geological consent—subject to change without notice."—Will Durant

Geology is the study of the Earth, and in particular its history, structure, and the processes that have molded our planet and its biosphere. Geology involves the origin of continents and ocean basins, earthquakes and volcanoes, variations in global climate, and how these physical changes impact the evolution of life. All of these planetary processes are viewed through the prism of "deep time," a perspective unique to geologists and one that distinguishes geology from most of the other physical sciences.

A significant component of geology is oriented toward the interaction between humans and the Earth. This aspect includes the study of resources such as minerals, oil, and water; identification and mitigation of Earth hazards such as earthquakes, landslides, floods, and volcanic eruptions; identification and mitigation of groundwater use planning; and the study of ancient and modern climate change.

The Program. Students interested in becoming professional geologists or continuing their geological studies at the graduate level should choose the Bachelor of Science degree program. The Bachelor of Arts program is for students interested in an interdisciplinary program of study, or who plan to go into pre-college teaching. Both programs allow students to emphasize an aspect of the field of particular interest to them. The upper division electives are not restricted to geology courses but must be chosen to provide a relevant, coherent, and in-depth program of study. Transfer students should have completed as much as possible of the preparatory subject matter listed below.

Internships and Career Alternatives. In recent years within the U.S., many geologists have been environmental and geotechnical consulting firms, with oil companies, research laboratories and government agencies also providing opportunities. Students graduating with a Bachelor's degree may get entry-level positions in the private sector or they may go on to attain their teaching credential to fill the growing need for science teachers at all pre-college levels. A Master's degree is the most versatile professional level degree, and a Ph.D. is generally required for research and academic positions. Internships are strongly encouraged for undergraduates and are an important component of student development.

Education Abroad Options. The department strongly encourages interested students to pursue a portion of their studies abroad. Within the constraints of the campus and individual student requirements, it is possible for students to complete significant portions of the Geology major at an international institution provided that the student consults with one of the undergraduate advisers and carefully plans a course of study abroad that will complement their coursework at Davis. In recent years, UC Davis Geology majors have spent their junior or senior years completing upper division coursework at EPIC partner institutions in New Zealand, Ghana, Chile, and the United Kingdom.

A.B. Major Requirements:

<table>
<thead>
<tr>
<th>UNITS</th>
<th>Preparatory Subject Matter:</th>
<th>40-43</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geology 3, 3L, 50, 50L</td>
<td>ngineering, Science and Engineering, Social, Economic and Policy Sciences</td>
<td>6.0</td>
</tr>
<tr>
<td>Mathematics 16A-16B or 21A-21B</td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td>Physics 7A-7B</td>
<td>8.0</td>
<td></td>
</tr>
<tr>
<td>Statistics 13 or 13V or 32 or 100</td>
<td>3.4</td>
<td></td>
</tr>
</tbody>
</table>

Depth Subject Matter: 36


Additional upper division electives chosen from upper division courses in geology or related subjects. Upper division courses in related fields may satisfy this requirement if approved in advance by the major advisor.

Total Units for the Major: 76-79

Recommended. Chemistry 100 or Hydrologic Science 134, Physics 7C.