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Environmental Studies and Natural Resource Management

An Annotated Guide to
University and Government Training Programs
in the United States

Prepared by the
SIERRA CLUB
International Earthcare Center
800 Second Avenue
New York, N.Y. 10017

ENVIRONMENTAL STUDIES AND
NATURAL RESOURCE MANAGEMENT

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SIERRA CLUB INTERNATIONAL EARTHCARE CENTER

This directory is the most recent in a series of publications prepared by the Sierra Club International Earthcare Center for individuals and institutions concerned with a spectrum of environmental policy and natural resource management issues, worldwide.

The Earthcare Center is the international arm of the Sierra Club. Since the Stockholm Conference on the Human Environment in 1972 the Center has functioned as an education, training and information source for decision makers in governmental and non-governmental agencies, in both the developed and developing countries of the world.

The new Earthcare Network consists of a select group of research and non-governmental agencies, including the Center for Law and Social Policy in Washington, D.C.; the Centro Agronomico Tropical de Investigacion y Ensenanza (CATIE) in Costa Rica; the East-West Center in Hawaii; EDUCAM in Caracas; the Environmental Law Information System, a joint project of the International Union for Conservation of Nature and Natural Resources and the International Council of Environmental Law in Bonn; the Environmental Liaison Centre in Nairobi; the European Environmental Bureau (EEB) in Brussels; the International Research Center on Environment and Development (CIRED), Ecole des hautes etudes en sciences sociales in Paris; and the New York Zoological Society. The Earthcare Network is developing, through the Center, specialized information packages including abstracts, case studies and policy briefings aimed at the practical problems of natural resource management.

The Earthcare Center also monitors the major international conferences which are concerned with environmental and natural resource policy issues, and maintains a library of the relevant documentation in its offices in New York City.

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Special mention should be made of the cooperation of the Institute of International Education, especially Barbara Cahn Connotillo, who assisted in making available the Institute's fine microfiche collection of university catalog materials.

Individual members of the fourteen U.S. MAB Directorates provided thoughtful direction throughout the development of the directory, and led us to some programs that would otherwise have been overlooked.

Any findings or recommendations expressed either explicitly or implicitly in this publication are those of the author, and do not necessarily reflect the views of either the Agency for International Development or the U.S. Man and the Biosphere Program. The author welcomes any comments which would assist in making an updated directory more accurate or useful.

J. Gary Taylor, Ph.D.

EXPLANATORY NOTE

This directory is part of a larger AID effort to build the informational and institutional capabilities of developing countries for the protection and management of their natural resources and environment.

Its production was substantially assisted by the U.S. National Committee of Unesco's Man and the Biosphere Program, which brings together diffuse national and international research, conservation and training activities aimed at solving concrete development problems.

In June of 1976, AID issued revised environmental guidelines which called, in part, for AID to cooperate to the maximum extent possible with host governments in data collection, preparation of environmental analyses, and consideration of alternatives as part of the mandated assessment process. Where there is a lack of adequate baseline data for assessments, or of local personnel with ability to contribute to the assessment, AID missions are to encourage and respond to host country requests for training and for technical help.

In 1972, at the invitation of the Director General of Unesco, the United States Department of State established a National Committee for Man and the Biosphere in the United States National Commission for Unesco.

The U.S. National Committee for MAB, with representatives from federal agencies, state and private institutions, guides the development of national research implementation and training activities which relate to the international program.

Under the direction of the MAB National Committee, MAB projects are administered by groups (directorates) of selected experts, whose chairmen, along with others, serve on the National Committee.

Although AID has a long history of training foreign nationals through U.S. universities, recent U.S. government mandates, together with an explosion of environmental train-

ing programs, suggest that a survey of U.S. institutional capacity for environmental training is both urgent and timely.

Environmental and natural resource management training courses in the U.S. at the university level surface through a bewildering array of traditional and current societal concerns. The agrarian history of the U.S. placed agricultural training first historically; but turn-of-the-century recognition of the importance of our forest resource spawned numerous new schools of forestry and graduated a new class of forestry professionals. At the same time, rapid urbanization gave rise to a need for sanitary engineering professionals, design, health and urban planning curricula, all having an environmental dimension.

Most of these specialties were certified at the graduate school level, but with the environmental movement of the late 1960s, many undergraduate schools added environmental courses or programs, and many of these are interdisciplinary, tying together both social and natural sciences. Some schools simply added the word "environment" to traditional course or program descriptions.

This directory is a "first cut" through the complexity noted above. Although it attempts to be inclusive rather than exclusive, no doubt some programs have been missed. It avoids subjective evaluations of programs, and uses instead limiting categories to assist in program selection.

The basic resources used in assembling this directory were: 1) library catalogs of all relevant colleges and universities; 2) a guide produced by the Institute of Environmental Sciences, Miami University, Oxford, Ohio, and funded by the U.S. Environmental Protection Agency, entitled "A Review of Selected Environmental Education Programs at the University Level" (1978); 3) The Guidance Information System, Tenth Edition (January 1979), a computerized data base intended primarily for the use of guidance counselors; 4) the microfiche collection of university programs maintained by the Institute of International Education (IIE) in New York; 5) The Register of Environmental Engineering Graduate Programs, Jane Klosky, ed., Third Edition (July 1974), sponsored by the Association of Environmental

Professors and the American Academy for Environmental Engineers, funded by the U.S. Environmental Protection Agency; 6) U.S. Man and the Biosphere Directorate chairmen; 7) various IIE secondary documents, the most important of which were: "English-language and Orientation Programs in the U.S." (1978) and "Open Doors--A Report on International Education Exchange" (1978); 8) the National College Databank (Princeton, Peterson's Guides, 1979); 9) Barron's Profiles of American Colleges, 10th Ed. (Woodbury, N.Y., Barron's Educational Series, Inc., 1976).

In addition, consultations with U.S. Government agencies training personnel and a host of private associations rounded out the effort.

Environmental Engineering is an important training field for developing countries. However, the Register of Environmental Engineering Graduate Programs is probably the most current and definitive guide currently available. To avoid duplication, we have not included these programs in the basic list of entries. We have included a brief reference to those programs in our Program Search Guide.

The short sections on training programs of government agencies and private associations are largely self-explanatory. Again, comprehensiveness was sought, but no limiting criteria were introduced except to note that many of these short courses are highly technical in nature and would be more appropriate for advanced professionals.

SAMPLE UNIVERSITY ENTRY

Name of institution.

General mailing address of institution.

Name of specific course, program, college or school.

Name of Dean, Program Director, or Chairman.

Degree(s) granted.

Brief description of course or program content.

Admission information. (This data is taken from the National College Data Bank, and represents the institution's own evaluation of relative entrance difficulty.) Barron's Profiles of American Colleges was also used.)

English Language Training. This entry summarizes the kinds of English language training facilities available at the institution. The summary is based on data

in the pamphlet "English Language and Orientation Programs in the United States," published by the Institute of International Education. "Program" designates activities usually available on a full-time basis, often intended to be taken prior to entering into study at institutions of higher education. "Course" designates support activities, usually instruction, which are offered part-time in conjunction with other studies. "Counseling" indicates a program with some or all of the following components: academic and social counseling, host family arrangements option, and preregistration orientation.

Number of foreign students. (The total number of non-immigrating foreign students enrolled in the entered institution in 1976-77, not always available MAB concentrations 1-14. (Unesco's Man and the Biosphere project areas detailed below.)

Resources were not available to survey some important capabilities which are emerging in the U.S. and should be cataloged soon. Among these are alternate technology, energy, and eco-development. Excellent programs in these areas have been developed by institutions listed in this directory, but communication with individual program directors is advised.

There exists a wide range of opinion as to the value of U.S.-oriented training courses for nationals from the developing world. Cultural differences are often masked by surface regularities, problems addressed are sometimes not applicable, etc. No effort was made in this directory to evaluate training programs from this point of view. A partial aid to selection is provided, however, in the notations with respect to the number of foreign nationals enrolled in the universities, the degree of entrance difficulty, and the presence or absence of English-language training programs, courses or facilities.

It is hoped that this directory will be of use to AID mission personnel and others who are deeply involved in the complex and subtle problems embedded in the environment/development equation.

MAB PROJECT AREAS USED FOR CRITERIA

1. Tropical Forests. Ecological effects of increasing human activities on tropical and subtropical forest ecosystems.
2. Temperate Forests. Ecological effects of different land uses and management practices on temperate and mediterranean forest landscapes.
3. Grazing Lands. Impact of human activities and land use practices on grazing lands--savanna and grassland (from temperate to arid areas).
4. Arid Zones. Impact of human activities on the dynamics of arid and semi-arid ecosystems.
5. Fresh water. Ecological effects of human activities on the value and resources of lakes, marshes, rivers, deltas, estuaries, and coastal zones.
6. Mountains. Impact of human activities on mountains and tundra ecosystems.
7. Islands. Ecology and rational use of island ecosystems.
8. Biosphere Reserves. Conservation of natural areas and of the genetic material they contain.
9. Pesticides/fertilizer. Ecological assessment of pest management and fertilizer use on terrestrial and aquatic ecosystems.
10. Engineering works. Effects on man and his environment of major engineering works.
11. Urban ecosystems. Ecological aspects of urban systems with particular emphasis on energy utilization.
12. Demographic change. Interactions between environmental transformations and the adaptive, demographic, and genetic structure of human populations.
13. Perception of environmental quality. Analysis of subjectively perceived environments to understand human well-being within any given environment.
14. Pollution. Develop a clearer understanding of the relation of pollution to the structure and functioning of terrestrial and associated aquatic ecosystems.

UNIVERSITY COURSES LISTED
ALPHABETICALLY BY STATE

ALABAMA

Alabama Agricultural and Mechanical University

Normal, AL 35762

Department of Natural Resources and Environmental Study

Dr. G.C. Sharma, Chairman

B.S. in Environmental Science; M.S. in Soil and Plant Science

Undergraduate program in natural resources, chemistry, and biology, coordinated by the School of Agriculture and Environmental Science, concentrating on air and water pollution, ecology, conservation, and agriculture. M.S. in plant sciences.

Admissions: Less difficult

Eng. language training: None

No. foreign students: 350

MAB concentrations: 3,14

Auburn University

Auburn, AL 36830

Department of Fisheries and Allied Aquacultures

E. Wayne Shell, Professor and Chairman

B.S., M.S., Ph.D.

Fisheries, aquaculture, ecology, limnology, water quality program complemented by extensive outdoor lab facilities. Additional programs in agronomy and soils, botany and microbiology, forestry, and zoology.

Department of Biology and Microbiology

J.A. Lyle, Head

M.S., Ph.D.

Facilities are available for studies in chemical waste control and plant ecology.

Department of Forestry
Emmett Thompson, Head
M.S., Ph.D.

Forest ecology, silvics, forest genetics, measurements,
soils, etc.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 199
MAB concentrations: 2,3,5,9, 11

Tuskegee Institute

Tuskegee Institute, AL 36088

School of Applied Science, Department of Agricultural Sci-
ences

B.S., M.S. in Soil Science, Plant Science, Environmental
Science

Principal areas of research include plant nutrition,
genetics, and physiology, soil physics, soil chemistry,
soil microbiology and soil fertility. The Experimental
Station for agriculture and the Carver Research Founda-
tion are sometimes adjuncts to the program.

Admissions: Less difficult
Eng. language training: None
No. foreign students: 250
MAB concentration: NA

ALASKA

Southeastern Senior College

P.O. Box 1447
Juneau, AK 99802

Division of Fisheries and Natural Sciences
Richard Gard, Coordinator and Associate Professor
B.S. in Fisheries, M.S. in Fisheries
Curriculum supplemented by practical training with
an approved fisheries agency. General science core,
studies of parasites, pathogens, algology and ichthyology.

Admissions: Less difficult
Eng. language training: None
No. foreign students: NA
MAB concentrations: 5

University of Alaska

Fairbanks, AK 99701

College of Mathematics, Physical Sciences and Engineering
Oceanography and Ocean Engineering Program
R. Theodore Cooney, Program Head and Associate Professor
M.S., Ph.D. (interdisciplinary)

Technical training (chemistry, geology, mathematics,
engineering) for oceanography and ocean engineering
careers. Courses include physical, chemical and biological
oceanography, marine geology, marine mammals, coastal
engineering, and marine hydrodynamics.

Fisheries Biology program specializing in interior
Alaska aquatic habitats. Land resources program on
forests, soil and water relations, agronomy, watersheds.
Natural resources management program. Wildlife management
program for spruce, aspen-birch, tundra and aquatic
habitats. B.S., M.S., Ph.D.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 41
MAB concentrations: 2,3,5

ARIZONA

Arizona State University
Tempe, AZ 85281

College of Architecture
Hugh Burgess, Dean

M.S. in Environmental Planning

Human settlements in arid regions stresses landscape and regional planning as opposed to the more traditional studies. A basic program of architectural courses must be satisfied before admission of non-discipline applicants. Completion of a first professional degree is generally required.

Division of Agriculture
Richard R. Chalquest, Director

M.S. in Agriculture

Environmental resources in agriculture, a program offering specialization in natural resource management, range ecology, and soil and plant ecosystems. Requires B.S. in agriculture or related field.

College of Liberal Arts
Guido G. Welgend, Dean

M.S. Botany, Ph.D. Botany

Program designed for teaching and for research careers. Focuses on various aspects of botany and microbiology concerning the structure and function of desert and mountain vegetation, air pollution, and water quality.

A Center for Environmental Studies also encourages and coordinates interdisciplinary environmentally related activity within the university.

Admissions: Moderately difficult
Eng. language training: Program, course
No. foreign students: 320
MAB concentrations: 3,4,6,14

Northern Arizona University
Flagstaff, AZ 86011

School of Forestry
Charles O. Minor, Dean
B.S. in Forestry, M.S. in Forestry
Forest and range ecosystems, watershed management.
Special studies of Ponderosa pine.

Department of Biological Science
James R. Wick, Chairperson
B.S.
An extended major (45 to 63 hours of non-duplicating biology and related courses) is available in aquatic biology or entomology.

Department of Chemistry
S. Savage, Chairman
B.S. (extended major in environmental chemistry)

Admissions: Very difficult
Eng. language training: None
No. foreign students: 36
MAB concentrations: 2,3,5,9

University of Arizona
Tucson, AZ 85721

Arid Lands Resources Sciences
A. Richard Kassander, Jr., Chairman
Ph.D. only
Interdisciplinary program, intended for advanced students with an interest in arid lands, combining physical, biological, and social science aspects.

Atmospheric Sciences
Louis J. Battan, Head
M.S., Ph.D.
Program emphasizes physical meteorology, climatology, atmospheric electricity and radiation; courses include bioclimatology, cloud microphysics, high atmosphere physics.

Department of Entomology
George W. Ware, Jr., Head
M.S., Ph.D.

Biological control, insect-pest management, applied
to range and forested areas.

Department of Hydrology and Water Resources
Stanley N. Davis, Head
M.S., Ph.D.

Ground and surface water hydrology, management,
and engineering.

Renewable Natural Resources
Ervin H. Zube, Director
M.S., Ph.D.

Program areas are watershed and range management, fisheries
science, wildlife ecology, and soil and water science.
Training for research and teaching or land management
positions requiring specialization in one of the program
areas.

Admissions: Moderately difficult
Eng. language training: Program
No. foreign students: 1255
MAB concentrations: 2,3,4,5,9, 13

ARKANSAS

Arkansas Technical University
Russellville, AR 72801

Fisheries and Wildlife Management Program
Buford L. Tatum, Director
B.S., Fisheries and Wildlife Management
A preparatory program for field biologists.

Admission: Noncompetitive
Eng. language training: None
No. foreign students: 4
MAB concentrations: NA

University of Arkansas
Fayetteville, AR 72701

Environmental Science
Hugh M. Jeffus, Coordinator
B.S., Environmental Science

A basic program administered by the colleges of agriculture, arts and sciences, and engineering. Main areas of concentration are air pollution, water pollution, solid waste disposal, resource and land management, conservation, and wildlife preservation.

Department of Entomology
Floyd D. Miner, Head
B.S., Agriculture (Plant Protection/Pest Control), M.S., Ph.D.

Pest control methods - agricultural and environmental impact.

Environmental Sciences
Jacob R. Phillips, Chairman
B.S., B.S. Agriculture

Pesticide ecology, agronomy, wastes, and environmental management are research areas within this interdepartmental program.

Department of Plant Protection/Pest Management
Derald A. Slack, Head

Air pollution, biological control of plant diseases and weeds, forest pathology, and soil microbiology.

Admissions: Moderately difficult
Eng. language training: Course, counseling
No. foreign students: 363
MAB concentrations: 2,9,11,14

CALIFORNIA

California State College, Bakersfield
9001 Stockdale Highway
Bakersfield, CA 93309

Environmental Studies Program
John R. Coash, Director
B.S., B.A.

Program offered by departments of biology, economics and physics/earth sciences. Major emphasis is on decision-making on environmental issues and the development of a deliberate, systematic approach to the study of environmental problems. Concentrations in biology, economics or earth sciences.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 20
MAB concentrations: NA

California State Polytechnic University, Pomona
Pomona, CA 91768

Department of Plant and Soil Science
Robert L. Procsal, Chairman
B.S., Agricultural Biology

Options are available in general agricultural biology and pest management. A high degree of specialization is stressed in the latter program.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 690
MAB concentration: 9

California State University, Chico
Chico, CA 95929

School of Agriculture and Home Economics
M.L. Maynard, Chairman
B.S. Agriculture, M.S. Agriculture

Options within the undergraduate division include range management, horticulture and agronomy. Further specialization in soils and irrigation is possible under the agronomy option. Eagle Lake Field Station, a teaching and research facility operated by the school

of Natural Sciences, is used for aquatic and terrestrial field studies.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 230
MAB concentrations: 3,5,9

California State University, Fresno

Shaw and Cedar Avenues
Fresno, CA 93740

Geography Department, School of Social Sciences
Stanley F. Norsworthy, Department Chairman
B.A., M.A.

Environmental studies coursework in pollution, environmental protection, and man/environment relationships.
Environmental design coursework including design theory and planning and policy problems.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 588
MAB concentrations: NA

California State University, Fullerton

Fullerton, CA 92634

Graduate Program in Environmental Studies
Prem Saint, Program Coordinator
M.S.

Emphasis of program is on human ecology, urban studies and environmental education, providing training in environmental design, community planning, pollution research and related fields. Departments of Biology, Chemistry, Political Sciences, Geography involved.
Program is divided into sciences, technological studies and education areas, each with an area advisor.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 230
MAB concentrations: 12

California State University, Hayward
Hayward, CA 94542

Environmental Studies Department
John H. Vann, Dean, Department of Geography
B.A.

A general interdisciplinary program for undergraduates administered by the Department of Geography with natural or social science elective tracks; diverse coursework in oceanography, meteorology, geology, climatology, environmental politics.

Admissions: Very difficult
Eng. language training: None
No. foreign students: NA
MAB concentrations: NA

California State University, Los Angeles
5151 State University Drive
Los Angeles, CA 90032

School of Letters and Science
Department of Microbiology and Public Health
Joseph T. Seto, Chairman
B.S., Environmental Health Science

Microbiology, biology, chemistry, mathematics, physics, and public health coursework, leading to registered sanitarian examination if desired (required for U.S. employment as a sanitarian).

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 746
MAB concentrations: 11

California State University, San Jose
San Jose, CA 95192

Environmental Studies Department
Building U 200
Donald F. Anthrop, Coordinator

California State University (Cont'd)

B.A. Environmental Studies, B.S. Environmental Studies
General, nonspecialized program; flexible to accommodate individual interests. Humanities or natural science concentrations. Coursework in political science, environmental law, urban design, environmental economics, management of natural resources.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: NA
MAB concentration: 11

Humboldt State University
Arcata, CA 95521

Department of Fisheries
John W. DeWitt, Jr., Chairman
B.S., M.S.

Core curriculum and physical limnology, biological limnology, ecology of freshwater fishes, water pollution, fisheries management.

Department of Forestry
Dale A. Thornburgh, Chairman
B.S.

Forest land and resource management. Emphasis is placed on preparing transportation systems and studies of forest industrial activity. Ecology, silviculture, genetics.

Department of Range Management
Robert B. Turner, Chairman
B.S.

Rangeland ecology, physiology, and management.

Department of Resource Planning and Interpretation
D.E. Craigie, Chairperson
B.S.

Resource planning, interpretation, and design applied to particular ecosystems.

Department of Watershed Management
F.D. Freeland, Chairman
No degree (other departmental emphasis)
Wildlands hydrology, watershed management and water
resources development are concentrations.

Department of Wildlife Management
R.G. Batzler, Chairman
B.S.
Zoology, range management, forestry, fisheries electiv
Wetland habitats, upland habitats, ecology and control
of wildlife diseases, behavior.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 41
MAB concentrations: 2,3,5,14

Loma Linda University
Loma Linda, CA 92350

Department of Agriculture
John E. Carr, Chairman
B.S., Agriculture
Program allows for a concentration in the study of
plant production.

Admission: Moderately difficult
Eng. language training: None
No. foreign students: 187
MAB concentrations: NA

San Francisco State University
1600 Hooloway Avenue
San Francisco, CA 94132

Ecology and Systemic Biology Program
Biological Science Building, 433
Harry D. Thiers, Graduate Coordinator
B.A., M.A. in Biology
Ecology and systemic biology as related to biology,

botany, zoology, and conservation and resource management.

Admissions: Moderately difficult
Eng. language training: Program, course, counseling
No. foreign students: 630
MAB concentrations: NA

San Jose State University
San Jose, CA 95521

Department of Biology
Joseph H. Young, Chairman
M.A., Biology
Concentration available in marine biology.

Admissions: Moderately difficult
Eng. language training: Course, counseling
No. foreign students: 821
MAB concentrations: NA

Stanford University
Stanford, CA 94305

School of Earth Sciences
Richard H. Jahns, Dean
M.S., Engineering, Ph.D.
Two divisions. Applied hydrology involves studies of water quality, chemistry, microbiology, and resources. Environmental earth sciences contains options in aqueous geochemistry, geomorphology, and hydrology seen from an environmental perspective.

Biological Sciences
Robert T. Schimke, Chairman
M.S., Ph.D.
No specific programs, but research may be conducted on any aspect of entomology, marine biology, plant pathology, and other environmentally related areas.

Admissions: Most difficult
Eng. language programs: Program, course

Stanford University (Cont'd)

No. foreign students: 1423
MAB concentrations: 2,5,10,11,14

University of California, Berkeley
Berkeley, CA 94720

College of Environmental Design

Richard Bender, Dean

B.A., M.A., Ph.D. in architectural fields

The college is comprised of the Departments of Architecture, City and Regional Planning, and Landscape Architecture, all of which offer many courses.

College of Letters and Science

Clyde Wahrhaftig, Head Advisor

B.A., major in Environmental Studies

Three distinct areas: physical, biological, or social sciences. Each program emphasizes comprehensive training in the fundamentals of mathematics, physics, chemistry, and biology, and in those areas of social science directly related to environmental questions.

College of Natural Resources

Dr. William E. Waters, Dean

Conservation and Resources Studies: Paul Gersper, Chairman

Forestry and Resource Management: Rudolf Groh

B.S., M.F.

Biology of natural resources (bioenergetics, entomology, genetic resources, plant pathology); conservation of natural resources (interdisciplinary program); forestry (ecology, silviculture, range management, hydrology, recreation and park management, economics) are all areas of study.

M.S. and Ph.D. programs are also offered in agricultural chemistry, entomology, forestry, genetics, parasitology, plant pathology, range management, soil science, and wildland resource science.

Admissions: Most difficult

Eng. language training: Program, course, counseling

No. foreign students: 1571

MAB concentrations: 2,3,5,6,9,11,13,14

University of California, Davis
Davis, CA 95616

College of Agriculture and Environmental Sciences
Dr. Nielsen, Associate Dean
B.S., M.S., Ph.D.

The college offers several programs including environmental toxicology, atmospheric science, ecology, entomology, plant protection and pest management, range management, soil science, water science, plant sciences, environmental studies and environmental planning and management. Each area has its own dean or chairperson.

Admissions: Most difficult
Eng. language training: None
No. foreign students: 646
MAB concentrations: 3,4,5,6,9,14

University of California, Irvine
Irvine, CA 92717

Program in Social Ecology
Dr. Ellen Greenberger, Director
M.A., Ph.D.

Human stress and adaptation, and its reciprocal effect on the environment. Population dynamics, growth, and pollution control.

School of Biological Sciences
Howard A. Scheiderman, Dean
B.S., Biology

Biology with a concentration in ecology and environmental biology; terrestrial and marine ecology.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 110
MAB concentrations: 12

University of California, Los Angeles
Los Angeles, CA 90024

Department of Biology

M.A., Ph.D.

Animal and plant systematics, biophysical plant ecology, ichthyology, marine biology, parasitology, soils.

Environmental Science and Engineering

Morton G. Wurtele, Advisor

3677 Geology Building

D., Environmental Science

Interdepartmental program. Students prepare course of study with advisor.

Admissions: Moderately difficult

Eng. language training: Course, program, counseling

No. foreign students: 1519

MAB concentrations: 1,14

University of California, Riverside

Riverside, CA 92502

Division of Environmental Sciences

Dr. Andrew Chang, Chairman

B.A., B.S.

Study in the natural or social sciences in relation to problems of environmental protection. Core courses plus either a physical/biological or a social/political/economic option.

Entomology

Ralph B. March, Chairman

B.A., B.S., M.S., Ph.D.

Department of Statistics

Dr. S. James Press, Chairman

Ph.D., Population Biology

Six areas contribute to an interdepartmental program: population biology, population genetics, population ecology, microevolution, demography, and statistical population biology.

Program in Pest Management

William H. Ewart

M.S., Pest Management

An ecologically-oriented interdepartmental program approaching problems of pest management from an interdisciplinary point of view. Applicant should have a bachelors degree in biological or agricultural science and related fields.

Program in Environmental Administration
Graduate School of Administration
Mr. Stahrl W. Edmunds, Dean
M.S., Administration

Core subjects in basic managerial skills. The program prepares students for careers oriented toward environmental or natural resource problems. Strong program in basic administration.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 210
MAB concentrations: 9,12

University of California, Santa Barbara
Santa Barbara, CA 93106

Environmental Studies Program
Department of Biological Sciences
B.A., M.A., Ph.D. in Aquatic and Population Biology
B.A., Environmental Biology
Graduate level: algal ecology, physiology, population genetics, parasitology. Marine biology, limnology, marine and freshwater ecology; behavior, ecology, systemics, biogeography, evolution for undergraduates.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 405
MAB concentrations: 5,11

University of California, Santa Cruz
Santa Cruz, CA 95064

Department of Biology
B.A., M.A., Ph.D.
Plant science, marine biology, and developmental studies.

Department of Environmental Studies

Kenneth S. Norris, Chairperson

Double or joint major. Projects include open space and recreation in mountainous regions, resource inventories of coastal areas, and environmental impact statements.

Center for Coastal Marine Studies

Supports research in coastal zone processes and marine geology of the continental shelves and island arcs.

Admissions: Very difficult

Eng. language training: None

No. foreign students: 48

MAB concentrations: 5,6,7,10

University of the Pacific

Stockton, CA 95211

Graduate School

Reuben Smith III, Dean

B.S., M.S. in Environmental Biology

Acquate biology, parasitology, and other water areas emphasis.

Admission: Moderately difficult

Eng. language training: Course, program, counseling

No. foreign students: 328

MAB concentrations: 5,14

University of Redlands

Redlands, CA 92373

B.A.

Non-technical curriculum varying from year to year, within Johnston College Division. Center for Wilderness Studies on campus; cooperative exchange program with Arizona's Prescott Center.

Admission: Very difficult
Eng. language training: Course, orientation
No. foreign students: 27
MAB concentrations: NA

University of San Diego
San Diego, CA 92110

Richard P. Phillips, Coordinator
Interdisciplinary minor degree
General program incorporating anthropology, biology,
chemistry, history, political science, sociology,
business administration. Core courses and sample
electives (environmental assessment practices,
vertebrate zoology, field botany, marine biology,
principles of public administration).

Admission: Moderately difficult
Eng. language training: None
No. foreign students: 90
MAB concentrations: NA

University of Southern California
University Park
Los Angeles, CA 90007

Department of Biology
Prof. Bernard C. Abbott, Chairman
Strong areas of concentration include marine biology,
ecology and biosystematics.

Department of Sociology
Malcolm W. Klein, Chairman
Environmental sociology, demography, and ecology.

Admissions: Moderately difficult
Eng. language training: Course, program, counseling
No. foreign students: 2750
MAB concentrations: 10,11,12,14

COLORADO

Adams State College

Alamosa, CO 81101

Department of Environmental Science

Richard C. Peterson, Director

B.A., Environmental Science

The program stresses both the scientific and humanistic aspects of the environment. Biology, physics, and earth science are the major concentration areas.

There are some 20 faculty involved.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 55

MAB concentrations: NA

Colorado State University

Fort Collins, CO 80523

General Environmental Studies Program

Mr. Frank J. Vattana, Director

B.A., B.S.

Agronomy

Wayne F. Keim, Head

B.S., M.S., Agriculture, M.S., Ph.D.

The undergraduate curriculum consists of core courses with additional concentration in crop science, foreign service in agronomy, industrial management, soil science and resources, and conservation. The graduate curriculum specializes in crop science (with further specialization in plant genetics possible under the auspices of the Genetics Institute) or soil science. Further specialization on forest and range soils in a cooperative program with the College of Forestry and Natural Resources.

Fishery and Wildlife Biology

Professor Douglas L. Gilbert, Head

B.S., M.S., Ph.D.

The undergraduate degree primarily qualifies students for positions of Forester or Hydrologist with the

U.S. Civil Service. Graduate areas of study include fish disease technology, watershed ecology, fish physiology, taxonomy, population dynamics and systems ecology.

Forest and Wood Sciences

W.E. Frayer, Head

B.S., M.S., Forestry, M.S., Ph.D.

Undergraduate majors in forest biology or management science, natural resources management, and wood science and technology. Silviculture, forest ecology, forest genetics, morphology, tree physiology, and multiple-use forest management are possible areas of graduate study. Cooperative programs exist with the Rocky Mountain Forest and Range Experimentation Station, the CSU Experiment Station, and the Colorado State Forest Service.

Department of Range Science

C. Wayne Cook, Head

B.S. in Range Ecology

Meeting U.S. Civil Service criteria, the program consists of a core and elective credits. Specialization in land rehabilitation (ecological classification and rehabilitation of surface mined areas) and range ecosystem management may occur - within the general program which covers management of soil and vegetation resources on rangelands.

Department of Recreation Resources

B.S., Outdoor Recreation; M.S., Ph.D.

Environmental interpretation, landscape planning, park and recreation administration, graduate study designed for careers in planning and administration, not research.

Admissions: Moderately difficult

Eng. language training: Course, program, counseling

No. foreign students: 422

MAB concentrations: 2,3,5,6,9,11

Fort Lewis College

Durango, CO 81301

Department of Biology, Agriculture and Forestry

Fort Lewis College (Cont'd)

Lee Preston Somers, Chairman
B.S. Botany, B.S. Biology

The undergraduate forestry program is designed for students planning to transfer to Colorado State University or other institutions to complete undergraduate studies.

Admissions: Less difficult
Eng. language training: None
No. foreign students: 23
MAB concentrations: NA

Mesa College

Grand Junction, CO 81501

School of Natural Sciences and Mathematics
William E. Putnam, Dean

B.S., Environmental Geoscience or Animal/Plant Management
Core with a concentration in applied biology constitutes the animal/plant management major. The other incorporates studies in resource exploration, recovery and land use with a similar introductory course.

Admissions: Noncompetitive
Eng. language training: None
No. foreign students: 19
MAB concentrations: NA

University of Colorado, Boulder
Boulder, CO 80309

Department of Biology
D. Wilson Crumpacker, Chairman
B.A., M.A., Ph.D.

Special laboratories augment research in limnology, fisheries biology and ecoenergetics.

Environmental Conservation
Kenneth Erickson, Program Coordinator
B.A.

Program emphasizes Rocky Mountain biology, geology, and geography.

Recreation
Warren Robichaux, Chairman
B.S.

Institute of Arctic and Alpine Research
Current research projects on climatology, plant and animal ecology, dendrochronology, and remote sensing in alpine and arctic regions. Complete research and living facilities at 9,500 feet.

Admission: Moderately difficult
Eng. language training: Course, program, counseling
No. foreign students: 426
MAB concentrations: 5,6,11

University of Denver
University Park
Denver, CO 80208

Natural Resources Program
John A. Carver, Jr., Director
Juris Doctor
Mining, oil and gas, water, and public land law. Taxation of natural resources. Joint degrees in law, economics and other fields may be planned.

Admissions: Very difficult
Eng. language training: Course, program, counseling
No. foreign students: 304
MAB concentrations: 6,11,14

University of Northern Colorado
Greeley, CO 80639

Department of Outdoor Education-Environmental Education
M.S., Ph.D.
Biology, recreation, environmental conservation; for preparation of teachers, managers, and specialists.

Admissions: Moderately difficult
Eng. language training: Course, counseling
No. foreign students: 136
MAB concentrations: 6

CONNECTICUT

University of Bridgeport Bridgeport, CT 06602

Department of Biology
Michael E. Somers, Chairman
M.S.

Courses are available in aquatic biology and ecology.

Admissions: Moderately difficult
Eng. language programs: Program, course, counseling
No. foreign students: 327
MAB concentrations: NA

University of Connecticut Storrs, CT 06268

Department of Plant Science
D.W. Allison, Head
M.S., Ph.D.

An appropriate science background is necessary for these programs, which focus on plant and soil science. The Ph.D. program specializes in agronomy, plant genetics, and plant nutrition. Program is administered by fifteen faculty with experimental fields and greenhouses supplementing academic programs.

Department of Ecology
Ralph P. Collins, Head
M.S., Ph.D.

Areas of study include animal behavior, insect ecology, limnology, marine biology, physiological ecology, plant ecology, and population ecology. Two month sessions annually in Costa Rica possible. (Qualified graduate students eligible to participate.)

University of Connecticut (Cont'd)

Admissions: Very difficult
Eng. language training: Course, counseling
No. foreign students: 283
MA3 concentrations: 1,5,9,11

Wesleyan University
Middletown, CT 06457

Department of Earth and Environmental Science
Jelle de Boer, Chairman
M.A., B.A., Earth Science

A program for students with limited geology backgrounds who wish to go on to Ph.D. studies or terminate studies at the Master level. Integrates offerings from biology, chemistry, and earth science programs.

Admissions: Most difficult
Eng. language training: None
No. foreign students: 20
MAB concentrations: NA

Yale University
New Haven, CT 06520

Atmospheric Science and Biometeorology
Barry Saltzman, Chairman of Advisory Committee
M.S., Ph.D.

Physics, dynamics, and chemistry of the atmosphere and oceans and the interrelationships of the atmosphere and biosphere. Air pollution, urban environmental health, terrestrial and marine ecology, forest meteorology, and hydrometeorology are within the scope of the program.

School of Forestry and Environmental Studies
Charles H.W. Foster, Chairman
M.S., Ph.D.

Graduate level programs offered with an orientation toward forest and natural resources problems. Ecosystems and the socioeconomic aspects of environmental issues are stressed. Basic and applied research, research forests; international natural resources;

courses include forest genetics, soil science, meteorology and hydrology, silviculture, economics.

Admissions: Most difficult
Eng. language training: Program, course, counseling
No. foreign students: 777
MAB concentrations: 1,2,5,11

DELAWARE

Delaware State College

Dover, DE 19901

Department of Agricultural and Natural Resources
Ulysses S. Washington, Chairman
B.S., Agriculture and Natural Resources
Areas of study included plant science, park administration, and natural resources. Some course areas include soil and water management, fisheries management, and vegetation management.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 14
MAB concentrations: NA

University of Delaware

Newark, DE 19711

Institute of Energy Conversion
Jack R. Vinson, Chairman
M.A., Ph.D., Energy Conversion
Primarily related to the use of solar energy, electric power, heating and cooling. Students normally enroll in a regular departmental program. Engineering, physics, economics, chemistry, mathematics, statistics and computer science, economics, agriculture and marine sciences areas of study are available.

Marine Studies

William S. Gaither, Dean

M.S., M.A., Ph.D.

Interdisciplinary program studying ocean and coastal zones comprehensively, including: marine biology, chemical oceanography, marine geology, physical oceanography, marine political affairs, and ocean engineering.

Department of Entomology and Applied Ecology

Dale F. Bray, Chairperson

M.S.

Augmented by close cooperation with the USDA Beneficial Insects Research Laboratory.

Plant Pathology

Donald F. Crossan, Dean

B.S., M.S., Ph.D.

Plant pathology control through biological, cultural and chemical means.

Admissions: Moderately difficult

Eng. language training: Course, counseling

No. foreign students: 200

MAB concentrations: 9,11

DISTRICT OF COLUMBIA

The American University

Massachusetts and Nebraska Avenues, N.W.

DC 20016

Billy R. Griffin, Director

"Second major" program: B.S., M.S.

Basically a multidisciplinary school of environmental systems analysis and management. Students study technological, administrative, and conservation aspects of environmental management. Limnology, ecosystem types studied in relation to management of toxic substances and pollutants.

Environmental Systems Management
Martha C. Sager, Program Director
B.S. Technology of Management, M.S. Technology
of Management

Limnological, fresh water, and marine saline systems,
estuarine and coastal ecotones, savannahs, grasslands,
deserts, and tropical rainforests are studied in relation
to the management of toxic and hazardous materials
and pollutants.

Admissions: Moderately difficult
Eng. language training: Course, program, counseling
No. foreign students: 1360
MAB concentrations: 1,2,3,4,5,14

George Washington University
DC 20006

Environmental Studies Program
Henry Merchant, Chairman
B.A., B.S.

A general environmental studies program. The B.A.
degree emphasizes the political and social aspects
for students aiming at law, politics or urban planning.
The B.S. is for those aiming to join the scientific
community.

Environmental Health Program
J.W. Millar, Chairman
B.S., Ph.D.

B.S. is offered by the School of Medicine and Health
Sciences. Basic coursework in epidemiology, mycology,
parasitology, and environmental health. Ph.D. degree
also offered.

Admissions: Moderately difficult
Eng. language training: Course, program
No. foreign students: 1836
MAB concentrations: 10,11,14

FLORIDA

Florida A and M University

Tallahassee, FL 32307

College of Science and Technology

Charles G. Kidd, Dean

B.S.

Undergraduate majors include botany and plant science, earth science, entomology and structural pest control, park management, soil science and agronomy. The structural pest control major prepares one for careers in entomology and aquatic entomology.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 87

MAB concentrations: 9

Florida Institute of Technology

Melbourne, FL 32901

Environmental Science

D.R. Mason

B.S., M.S.

The program is designed to provide graduates with the opportunity to pursue careers in environmental planning, biology, water or wastewater treatment, pollution abatement, or resource management.

Admissions: Moderately difficult

Eng. language training: Course, program

No. foreign students: 378

MAB concentrations: 11

Florida Technological University

Orlando, FL 32816

Department of Biological Sciences

D. Vickers, Chairman

B.S. Biological Science, option in limnology

Limnology, freshwater algae, freshwater systems, ichthyology.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 94
MAB concentrations: 5,11

Rollins College

Winter Park, FL 32789

Department of Environmental Studies
Thomas Devaney Harblin, Coordinator
B.A.

Interdisciplinary program consisting of a liberal arts and sciences core and general courses on environmental issues. Designed for pursuing a graduate career or internship.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 0
MAB concentrations: NA

Stetson University

Deland, FL 32720

Department of Biology
Dorothy Langford Fuller, Chairman
Degree: cooperative

In cooperation with the School of Forestry of Duke University (North Carolina), Stetson offers a program terminating in the Master of Forestry degree. First three years spent at Stetson; at end of period, if accepted, students undertake graduate study at Duke.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 41
MAB concentrations: NA

University of Florida
Gainesville, FL 32611

College of Agriculture, Department of Agronomy
C.Y. Ward, Chairman
Ph.D., M.S.

Specialization possible in crop ecology, nutrition, physiology, weed science, genetics, cytogenetics, plant breeding. In the doctoral program additional specialization in forest genetics. Forty faculty staff the department.

College of Liberal Arts, Sciences and Agriculture
I.K. Vasil, Chairman
M.S., Master of Agriculture

Topics include anatomy, morphology, phycology; research facility on the Gulf of Mexico.

College of Agriculture, Department of Entomology and Nematology
F.G. Maxwell, Chairman

M. Agriculture, M.S., Ph.D.

Concentrations in entomology, nematology, and acarology possible.

College of Agriculture, School of Forest Resources and Conservation

A.C. Mace, Jr., Director

M.S., Ph.D., Master of Forest Resources and Conservation (non-thesis)

The Masters program contains specialization in forestry, forest products and technology, range ecology, wildlife ecology. The Ph.D. programs are in cooperation with other departments.

College of Agriculture, Department of Plant Pathology

L.H. Purdy, Chairman

M. Agriculture, M.S., Ph.D.

Biochemical and genetic aspects of host-pathogen systems, epidemiology, pathogen taxonomy. Thirty faculty staff the department.

College of Agriculture, Department of Soil Science

C.F. Eno, Chairman

M.S., M. Agriculture, Ph.D.

Areas of study include soil chemistry, soil genesis,

soil classification, microbiology, soil physics, and soil fertility.

Research Institutions: Center for Aeronomy and Other Atmospheric Sciences, Center for Aquatic Sciences, Center for Wetlands, Organization for Tropical Studies.

Admissions: Moderately difficult
Eng. language training: Program
No. foreign students: 772
MAB concentrations: 1,2,3,5,9,11,14

University of Miami
Coral Gables, FL 33124

Department of Biology
Oscar T. Owre, Chairman
M.S., Ph.D.

The environmental biology program, a division within the department, offers graduate training in ecology with an emphasis on peninsular Florida. Research aspects involve remote sensing, photo-ecology, pollution studies, marine, limnological, and estuarine studies. Quantitative and physiological ecology are also available.

Laboratory for Quantitative Biology
Studies functional biology of whole organisms and their relation to the environment.

Admissions: Moderately difficult
Eng. language training: Program, counseling
No. foreign students: 553
MAB concentrations: 1,5,9,11,14

University of South Florida
Tampa, FL 33620

Department of Biology
B.A., M.A., Ph.D.
Within the four divisions of botany, microbiology, biology, and zoology, students may pursue concentrations

including ecology and marine biology. Tropical ecology is offered on the doctoral level.

Admissions: Moderately difficult
Eng. language programs: Program, courses, counseling
No. foreign students: 350
MAB concentrations: 1

GEORGIA

University of Georgia

Athens, GA 30602

Agronomy

W.L. Colville

M.S., Ph.D.

Crops - plant breeding and genetics, forage utilization, seed technology, weed control. Soils - classification, nutrition, biotic responses to environmental factors.

Botany

Joe L. Key

M.S., Ph.D.

Field work at an ecology lab and inland sites. Taxonomy of grasses, plant population ecology, community ecology, aquatic plants, terrestrial ecosystem patterns.

Entomology

Preston E. Hunter

Master of Plant Protection and Pest Management, M.S.,
Ph.D.

Specialized training in aquatic environments, forest entomology, insect ecology, toxicology.

Forest Resources

A.M. Herrick

M.S., Ph.D.

Forest ecology, silviculture, tree physiology, forest genetics, hydrology, silviculture, facilities for terrestrial wildlife and fisheries management research.

Geography

James O. Wheeler

M.A., Ph.D.

Human and regional geography; population settlement patterns in relation to natural resources. North American urban geography, land use, geography of transportation, land use, world population geography.

Plant Pathology and Plant Genetics

W.N. Garrett

M.S., Ph.D., Master of Plant Protection and Pest Management
Strong tradition of scholarship in mycology. Majors in plant pathology, mycology, plant genetics.

Admissions: Moderately difficult

Eng. language training: Course, program

No. foreign students: 423

MAB concentrations: 1,2,3,5,9,10,12

HAWAII

University of Hawaii, Manoa

2540 Maile Way

Honolulu, HI 96822

Agronomy and Soil Science

P.P. Rotar, Chairman

M.S., Ph.D.

Graduate field of study offers two options: agronomy, soil science. Tropical crop production, weed science, pasture management, plant-soil relationships, fertility, microbiology.

Entomology

W.C. Mitchell, Chairman

M.S., Ph.D.

Specialization in biology control of insect and weed pests, insect ecology, toxicology, tropical economics of entomology, phylogenetic studies related to geographical isolation; aspects of introduction foreign species.

Geography

R.J. Fuchs, Chairman

M.A., Ph.D.

Population geography, agricultural geography, biogeography, urban and regional systems.

Pacific Island Studies

C.J. Daeufer

M.A.

Interdepartmental studies of Hawaii, Micronesia, Polynesia, Melanesia.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 1146

MAB concentrations: 1,3,7,9,11,12

IDAHO

University of Idaho

Moscow, ID 83843

College of Agriculture

Auttis M. Mullins, Dean

B.S.

Departmental majors include five areas related to MAB program: bacteriology (terrestrial, aquatic, food, industrial aspects); microbial ecologies and natural systems energy flows; entomology (taxonomy, ecology, physiology, agriculture); plant protection (integrates entomology, plant pathology, and weed science); plant science and soil science.

College of Forestry, Wildlife and Range Sciences

John H. Ehrenreich, Dean

B.S.

Majors may be chosen in fishery resources, forest products, forest resources, range resources, or wildland and recreation management. Aspects of the fishery resource major include aquatic entomology, limnology, warm-water fish, genetics, and population.

College of Mines and Earth Resources

Maynard M. Miller, Dean

B.S. Geological Engineering, B.S. Mining Engineering
Application of engineering principles to related geological problems, such as location of roads, dam sites, and reservoirs. Mining engineering examines rock mechanics, land reclamation and environmental impact.

Graduate Department of Entomology

Arthur R. Griffins, Head

M.S., Ph.D.

Research may be conducted in agricultural entomology, aquatic entomology, biological control, forest entomology, or transmission of plant viruses.

Graduate Department of Bacteriology and Biochemistry

Campbell M. Gilmour, Head

M.S., Ph.D.

An interdisciplinary program with focus on microbial ecology, microbial control of insects, and soil microbiology.

Graduate Department of Biological Sciences

Kenneth A. Lawrence, Department Chairman

M.S., Master of Natural Science, Ph.D.

The Master of Natural Science is primarily a teaching degree. Investigations in aquatic biology, developmental plant anatomy, environmental physiology, genetics, parasitology, and plant ecology, occur in the other graduate degrees.

Graduate Department of Geology

George A. Williams, Head

M.S. (Geological Engineering)

Graduate Department of Mining Engineering and Metallurgy

John R. Hoskins, Department Head

M.S., Ph.D.

Graduate Department of Plant and Soil Sciences

Lucas Calpauzas, Head

M.S., Ph.D.

Possible thesis concerns include plant breeding and genetics, plant pathology, soil chemistry and fertility.

Admissions: Moderately difficult
Eng. language training: Course, program, counseling
No. foreign students: 190
MAB concentrations: 2,5,6,9,10,11

ILLINOIS

Governors State University Park Forest South, IL 60466

The College of Environmental and Applied Sciences
Peter Fenner, Acting Dean
B.A., M.A.

Program on natural systems processes, environmental analysis, ecology and conservation, management, human impacts, and science and technology's role in solving environmental problems.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 0
MAB concentrations: 10

Illinois State University Normal, IL 61761

Graduate Department of Agriculture
George W. Forgey, Chairman
M.S. Agriculture

An inter-institutional program with the University of Illinois. Plant propagation, soil fertility and fertilizers are studied.

Admissions: Moderately difficult
Eng. language training: Course, program, counseling
No. foreign students: 249
MAB concentrations: 9

Knox College
Galesburg, IL 61401

Dr. Schromm, Dr. Ward
B.S. Biology

Ecological studies may be stressed through coursework in forestry and prairie ecology, human ecology, limnology and marine science. Programs may be supplemented by tropical field studies in Costa Rica, forestry studies at Wilderness Field Station or Green Oaks Preserve.

Admissions: Very difficult
Eng. language training: Course
No. foreign students: 15
MAB concentrations: 1,2,3,5

Northwestern University
Evanston, IL 60201

Urban and Regional Planning - Human Factors and Environmental Adaptation

The Technological Institute

Prof. George L. Petterson

M.S., Ph.D.

Environmental preference and perception, behavioral demand analysis for environmental systems and services.

Biological Sciences

Lawrence J. Gilbert, Chairman

M.S., B.S., Ph.D.

Plant physiology, biogeography, entomology, population, tropical ecology, evolutionary ecology.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 635
MAB concentrations: 1,10,11,13

Southern Illinois University, Carbondale
Carbondale, IL 62901

Department of Forestry
Howard A. Spalt, Chairman
B.S., M.S., Forestry
Forest resource management, outdoor recreation management, wood science and technology, environmental studies.

Department of Plant and Soil Science
Gerald D. Coorts, Chairman
M.S., B.S.
Plant, soil, horticultural environmental studies in agriculture.

Admissions: Moderately difficult
Eng. language training: Course, program, counseling
No. foreign students: NA
MAB concentrations: 2

Southern Illinois University, Edwardsville
Edwardsville, IL 62026

Environmental Studies
Vaughnie J. Lindsay, Dean, Graduate School
M.S.
Studies in aquatic, wildlife biology, ecology, and environmental chemistry may be selected.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: NA
MAB concentrations: NA

University of Chicago
Chicago, IL 60637

Department of Biology
Hewson H. Swift, Chairman
M.S., Ph.D.
Genetics, ecology, population and evolutionary ecology, and animal behavior. Research at microscopic or field level. Studies in Central America and Africa are possible.

Committee on Evolutionary Biology
Lynn H. Throckmorton, Chairman

Integrates studies in botany, ecology, anthropology, theoretical biology and zoology. Tropical studies in Costa Rica. Ph.D. only.

Admissions: Most difficult
Eng. language training: None
No. foreign students: 542
MAB concentrations: 1

University of Illinois, Urbana-Champaign
Urbana, IL 61801

Agronomy

Robert W. Howell, Head
M.S., Ph.D.

Crop breeding, genetics, soil chemistry and fertility, biochemistry, environmental agronomy.

Environmental Studies

B.E. Ewing, Director

Coordinates inter- and multi-disciplinary program.
No academic program offered.

Forestry

I.I. Holland, Head

M.S., Ph.D. (in cooperation with other departments)

Economics, environmental biology, genetics, plant and soil physics.

Department of Ecology, Ethology, and Evolution

E.M. Banks

M.S., Ph.D.

Biogeography, ecological systems, resource management and related topics.

Entomology

Stanley Friedman

M.S., Ph.D.

Plant Pathology

Richard E. Ford

M.S., Ph.D.

Field coordination; biochemistry of plant diseases,
disease resistance, etc.

Population Studies

Paul Handler, Chairman

Social implications of population dynamics; coordination
of multi-disciplinary program.

Admissions: Very difficult
Eng. language training: Program
No. foreign students: 1199
MAB concentrations: 2,9,11,12,14

INDIANA

Ball State University

Muncie, IN 47306

Department of Natural Resources

Clyde W. Hibbs, Chairman

M.S. Natural Resources

Resources and management studies.

Admissions: Moderately difficult
Eng. language training: Course
No. foreign students: 189
MAB concentrations: NA

Butler University

4600 Sunset Avenue

Indianapolis, IN 46208

Cooperative degree program

Duke University cooperative program. Three years
at Butler and two years at Duke (where Master of Forestry
degree granted).

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 20
MAB concentrations: NA

Franklin College
Franklin, IN 46131

Department of Biology
Dr. Barry Knisley

Cooperative degree program

A five-year 3-2 program with Duke University, terminating in the Master of Forestry or Master of Environmental Management degree. If accepted by Duke, student receives at B.S. after one year of additional study, the graduate degree after two.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 10
MAB concentrations: NA

Indiana Central University
Indianapolis, IN 46227

Cooperative program with Duke University

Admission: Less difficult
Eng. language training: None
No. foreign students: 9
MAB concentrations: NA

Indiana University, Bloomington
Bloomington, IN 47401

Division of Biological Sciences
C.H.W. Hirs, Chairman
Department of Plant Science
M.A., Ph.D.

Interdepartmental offerings in ecology and environmental biology. Programs also available in the Department of Zoology and Environmental Studies Department, in which a B.S. is offered.

Admissions: Moderately difficult
Eng. language training: Course, program
No. foreign students: 1392
MAB concentrations: NA

Indiana University, South Bend

1825 Northside Boulevard
South Bend, IN 46614

Division of Public and Environmental Affairs
Frank X. Steggert, Chairman
Associate of Science in Public Affairs, B.S. Public Affairs
Core courses in environmental policy and planning,
law, urban studies, administration and public affairs;
program for those planning careers in government.

M.S. Public Affairs or Environmental Science also
offered. Coursework includes basic sciences, public
policy, applied environmental science and professional
experience (internship or research).

Admission: Moderately difficult
Eng. language training: None
No. foreign students: NA
MAB concentrations: 11

Notre Dame

Notre Dame, IN 46556

Department of Biology
Theodore J. Crovello, Chairman
M.S., Ph.D.

Field studies at the 5,400-acre Environmental Research
Center supplement courses in ecological, limnological,
and entomological concentrations.

Environic Design
Ambrose Richardson, Chairman
M.S. Environic Design
Multidisciplinary, architecturally based program.
Concerned with urban, rural, wilderness, and regional
planning; industrial and commercial operations and

their environic consequences; conservation; leisure recreation.

Admission: Very difficult
Eng. language training: Course
No. foreign students: 300
MAB concentrations: 5,9,11

Purdue University

West Lafayette, IN 47907

Agricultural Engineering

G.W. Isaacs, Head and Professor

M.S., M.S. Agricultural Engineering, Ph.D.

Physical properties of biological materials, soil vehicle mechanics, water resources planning, and environmental control.

Agronomy

M.W. Phillips, Head

M.S., Ph.D.

Majors may be selected in plant genetics and breeding, crop physiology, soil fertility and plant nutrition, chemistry, physics, minerology and genesis, microbiology, management, land use and agricultural meteorology. Soil, crops, international agronomy (to acquaint students with agricultural products and techniques in the U.S. and abroad) programs.

Botany and Plant Pathology

M.L. Tomes, Head

M.S., Ph.D.

Major fields of concentration are plant pathology, plant physiology, genetics, weed science, soil and agricultural microbiology.

Entomology

E.E. Ortman, Head

M.S., Ph.D

Majors in apiculture, aquatic entomology, biological control, economic entomology, forest entomology, pest control, pesticide chemistry, or toxicology.

Forestry and Natural Resources

M.C. Carter, Head

M.S., M.S. Forestry, Ph.D.

Specialization in forest biology (ecology, genetics, physiology, soil, and silviculture), measurements and operations, outdoor recreation, wildlife science (fisheries biology, physiology, ecology and management); graduate emphasis on management of forested lands.

Geosciences

G. Kullerud, Head

M.S., Ph.D.

Earth resources (mineral and energy reserves) and engineering geology (groundwater geology, water resources, environmental geology, and urban geology) are areas of concentration.

Water Resources

D. Wiersma, Director

Interdisciplinary program, with degrees served by other departments. Physics, chemistry of soil, water aquatic biology, water management, climatology, groundwater studies, engineering economic analysis, topics of research.

Admissions: Very difficult

Eng. language training: Course, counseling

No. foreign students: 976

MAB concentrations: 2,5,9,11

IOWA

Coe College

Cedar Rapids, IA 52402

B.A.

An environmental studies concentration with the bulk of coursework in social or natural sciences is offered.

Admissions: Very difficult

Eng. language training: Course

No. foreign students: 19

MAB concentrations: NA

Iowa State University
Ames, IA 50010

Agronomy

John T. Pesek, Head

B.S., M.S., Ph.D.

Soil, crops, agricultural climatology.

Animal Ecology

Robert C. Summerfelt, Chairman

B.S., M.S., Ph.D.

Animal behavior, limnology and fisheries biology,
wildlife biology.

Botany and Plant Pathology

Frederick Smith, Head

B.S., M.S., Ph.D.

Aquatic plant biology, ecology, economic history,
morphology and taxonomy are specialties.

Entomology

Paul Dahm, Chairman

B.S., M.S., Ph.D.

Behavior, biological control, ecology, economic ento-
mology, insect-host-plant relationships, pathology,
pest mangement, systematics.

Environmental Studies Office, 141 Bessey Hall

Craig B. Davis, Coordinator

No degree

Program's elements include environmental science,
technology, planning, assessment and education. Colleges
of Engineering, Home Economics, and Sciences and Human-
ities participate.

Forestry

George W. Thompson

B.S., M.S., Ph.D.

Administration, forest management, biology (M.S. only),
biometry, wood science, economics.

Water Resources

Merwin D. Dougal, Supervisory Committee

M.S., Ph.D.

Programs offered by several departments in cooperation. Fundamental research in hydrology, water control facilities, water quality and water resources development; economics issues can be incorporated into curriculum.

Pest Management

Larry P. Pedigo, Chairman, Advisory Committee

B.S.

An undergraduate secondary major which may be taken only in conjunction with a primary major.

Admissions: Moderately difficult

Eng. language training: Program, course, counseling

No. foreign students: 1095

MAB concentrations: 2,3,5,9,11,14

Iowa Wesleyan

Mount Pleasant, IA 52641

Division of Natural Sciences

Cooperative program

Two forestry programs have been established, one with Iowa State University (Ames) and one with Duke University. Both are on the 3/2 program. After one year of study, a B.S. Biology or B.S. Forestry is awarded by Iowa Wesleyan. After the second year, Iowa State grants an M.S. while Duke grants an M.S. Forestry.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 6

MAB concentrations: NA

University of Northern Iowa

1222 West 27th Street

Cedar Falls, IA 50613

College of Natural Sciences, Interdepartmental Faculty
Committee

B.A.

Environmental Planning emphasis within the Science
Major. Ecological approach to environmental planning
and land use; program coordinated by an interdepartmental
committee.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 93

MAB concentrations: NA

KANSAS

Kansas State University

Manhattan, KS 66506

Agronomy

H.S. Jacobs, Head

M.S., Ph.D.

Admissions requires a program in one of the sciences.
Research may be conducted in crop science, soil science,
range management, soil-water-plant relationships,
or soil physics and fertility.

Natural Resource Management

B.S., Agriculture

Application of ecological principles to environmental
problems involving renewable natural resources. Curricu-
lum options in soil and water conservation. Range
management or parks and recreations areas management
options.

Plant Pathology

J.F. Shepard, Head

B.S., M.S., Ph.D.

Undergraduate study of causes, nature and control
of plant diseases. Graduate specialization in host
parasite relations, ecology of disease development,
disease resistance and chemical control.

Crop Protection

Advisors

B.S., Agriculture

Proper uses of various types of controls of crop pests, pest management, and integrated control are investigated.

Biology

R.A. Consigli, Acting Director

B.S., Fisheries and Wildlife Biology

Fisheries, wildlife, or conservation biology.

Graduate Program

M.S. degrees in Agricultural Engineering, Agronomy, Crop Protection, Entomology, Parasitology, Plant Pathology

Admissions: Moderately difficult

Eng. language training: Course, counseling

No. foreign students: 532

MAB concentrations: 3,5,9,11

Ottawa University

Ottawa, KS 66067

Faculty of Natural Studies

Jack V. Hall, Advisory Council

B.A.

An undergraduate program for careers in interpretive ecology, research, or resource management.

Admissions: Moderately difficult

Eng. language training: Program

No. foreign students: 43

MAB concentrations: NA

KENTUCKY

Eastern Kentucky University

Richmond, KY 40475

Department of Biological Studies

Edwin A. Hess, Chairman

B.S., M.S.

Core and selected electives; two-year preforestry program with option to transfer to the University of Kentucky; fisheries management, wildlife management, aquatic biology, wildlife ecology.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 160
MAB concentrations: 5

Murray State University
Murray, KY 42701

College of Environmental Sciences
Marshall Gordon, Dean

B.S., Biology

The undergraduate curriculum specializes in fish and wildlife biology and is supplemented by a 170,000 acre natural laboratory. Cooperative forestry program with the University of Kentucky.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 135
MAB concentrations: 5

University of Kentucky
Lexington, KY 40506

Agronomy

C.B. Collins, Director; R.E. Phillips, Director
M.S., Ph.D. in Crop or Soils Science

Permits options in plant breeding, genetics, crop ecology, management, seed technology, and weed science. Chemistry, fertility, minerology, microbiology, genesis and physics of soils.

Entomology

Bobby Pass, Chairman
M.S., Ph.D.

Research covers insect biology and ecology, host-plant resistance, biological control.

Forestry

Bart Thielges, Chairman

M.S., Agriculture (forestry option)

Students investigate forest soils, hydrology and water quality, surface mine reclamation, forest wildlife, and economics.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 444

MAB concentrations: 2,9,11

Western Kentucky University

Bowling Green, KY 42101

Department of Agriculture

L.D. Brown, Head

Wildlife Ecology and Conservation

Preforestry program

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 165

MAB concentrations: 3,11

LOUISIANA

Centenary College of Louisiana

Shreveport, LA 71104

Department of Biology

A. Bradley McPherson, Chairman

Cooperative degree program

Preforestry program involving transfer to Duke University for a Master's degree.

Admissions: Moderately difficult
Eng. language training: Course
No. foreign students: 36
MAB concentrations: NA

Louisiana State University
Shreveport, LA 71104

Agronomy

William H. Willis, Head

B.S., M.S., Ph.D.

Crop breeding, genetics, micronutrient soil elements,
soil fertility, morphology, and management.

Entomology

L. Dale Newsom, Head

B.S., M.S., Ph.D.

Topics include pest management and host-plant resistance.

Plant Pathology

Weston J. Martin, Head

B.S., M.S., Ph.D.

Year-round field studies and research conducted in
plant pathology, weed control, plant physiology.

School of Forestry and Wildlife Management

Thomas Hansbrough, Director

B.S., M.S., M. Forestry, Ph.D.

Forest policy, wildlife and ecology, silviculture,
soils, measurements, management.

Admissions: Moderately difficult
Eng. language training: Program
No. foreign students: 1513
MAB concentrations: 2,9

Louisiana Technical University
Ruston, LA 71272

Agronomy-Horticulture

John A. Wright, Acting Head

B.S.

Core and electives in either soils or crops.

Botany and Bacteriology

Dallas D. Lutes, Head

M.S., Wildlife Conservation

Designed to train conservation workers as managers, naturalists, and researchers.

School of Forestry

J. Larma Teate, Head

B.S., M.S.

Seven options are available which include general forestry, forestry business, forestry mechanization, forestry recreation, forestry science, forestry wildlife, and summer programs.

Admissions: Noncompetitive

Eng. language training: Course, program, counseling

No. foreign students: 100

MAB concentrations: 2

McNeese State University

Lake Charles, LA 70609

Agriculture

Onis D. Hyatt, Head

B.S.

Majors established in agronomy, forestry, and wildlife management.

Biology

George V.S. White, Head

B.S.

The concentration in aquatic biology allows students to pursue advanced degrees in aquatic or marine biology.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 26

MAB concentrations: 2,5

Northeast Louisiana University

Monroe, LA 71209

College of Pure and Applied Sciences
Daniel E. Dupree, Dean
B.S., Wildlife Conservation and Management
Core and two years of selected electives.

Admissions: Noncompetitive
Eng. language training: None
No. foreign students: 85
MAB concentrations: NA

University of Southwestern Louisiana
Lafayette, LA 70504

Agronomy
B.S., Agriculture
Soil fertility, conservation, and industrial fertilizers.

Biology and Microbiology
M.S. Fishery Biology, Wildlife Management
Core and electives including limnology, ichthyology,
fishery management, oceanography, supplemented by
research at a marine station.

Admissions: Less difficult
Eng. language training: Course, program, counseling
No. foreign students: 773
MAB concentrations: 5,9

MAINE

Bowdoin College
Brunswick ME 04011

Department of Environmental Studies
Samuel S. Butcher, Chairman
Coordinate major degree
Students complete a departmental major and other work
related to environmental matters. Selection of inde-
pendent study recommended.

Admissions: Most difficult
Eng. language training: None
No. foreign students: 14
MAB concentrations: NA

Colby College

Waterville, ME 04901

Environmental Studies
Professor Pestina, Acting Director
B.S.

Interdisciplinary course established in 1971, core plus approved electives administered by a steering and advisory committee.

Admissions: Very difficult
Eng. language training: Course
No. foreign students: 16
MAB concentrations: NA

College of the Atlantic

Bar Harbor, ME 04609

B.A. in Human Ecology

Small student body (120 students) and no departments. Non-traditional academic program. The environmental science curriculum includes aspects of the biological sciences, natural history, and marine biology. Much field work on an individual basis.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 0
MAB concentrations: NA

University of Maine, Orono

Orono, ME 04473

College of Life Sciences and Agriculture
Botany and Plant Pathology
Douglas A. Gelinias, Chairman

B.S.
Dendrology, plants, lake ecology, and productivity.

Entomology

B.S., M.S.

Forest entomology, forest insect ecology, economic entomology, and aquatic entomology.

Plant and Soil Science

Stewart M. Goltz, Chairman

B.S.

Soil fertility and conservation.

School of Forest Resources

Fred Knight, Director

B.S., M.S. Forestry, Wildlife Conservation, Ph.D. Forest Resources

Five undergraduate curricula with ten sequences offered in the fields of forestry and forest products, wildlife, wildlife management, forest management, wildlife ecology, natural resources management, land use planning, or forest engineering.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 80

MAB concentrations: 2,5,9,11

MARYLAND

Frostburg State College

Frostburg, MD 21532

Department of Wildlife and Fisheries

Professor Melvin Brown, Head

B.S. Wildlife-Fisheries, M.S. Wildlife Management, Fisheries Management

The Department, in cooperation with the Appalachian Environmental Laboratory, offers the undergraduate program. Graduate degrees emphasize administration, research, and management.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 0
MAB concentrations: 5

Johns Hopkins University
Baltimore, MD 21218

Department of Geography and Environmental Engineering
M. Gordon Wolman, Chairman
B.S., M.S., Ph.D.

Special strengths in environmental engineering; ecology and surficial earth processes (includes aquatic biology, plant geography, and soils); and urban spatial location, including the social environment and models of urban development.

Department of Environmental Health Sciences
Gareth M. Green, M.D., Chairman
M.H.S., Sc.M., Sc.D., Dr.P.H., Ph.D.

The Division of Environmental Health Engineering offers training and research in water and wastewater treatment, air pollution control and industrial hygiene. Effects of environmental chemicals of biological systems, both micro and macro, are investigated by the Division of Environmental Toxicology. The Division of Air Hygiene considers environmental factors contributing to respiratory diseases.

Admissions: Most difficult
Eng. language training: Course
No. of foreign students: 184
MAB concentrations: 5,8,11,12,14

University of Maryland, College Park
College Park, MD 20742

Agricultural Resource Economics Program
Billy Lessley, Chairman
M.S., Ph.D.

Two options. Production economics: resources management and fisheries economics are investigated. Resource

management and development option: specializations in water resources, marine resources, land use, and other aspects of environmental management.

Agricultural Engineering
Wesley Harris, Chairman
M.S., Ph.D.

Specialization in agriculture or aquaculture engineering. Topics include production, harvesting, processing and marketing with an emphasis on conservation of land and water resources.

Agronomy
James R. Miller, Head
M.S., Ph.D.

Thesis and non-thesis options. Crop or soil studies. Forest management, weed science, soil and water conservation, soil-environment interaction.

Entomology
Allen L. Steinhauer, Chairman
M.S., Ph.D.

Biosystemics, ecology and behavior, economic entomology.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 627
MAB concentrations: 5,6,9

MASSACHUSETTS

Boston State College
625 Huntington Avenue
Boston, MA 02115

Department of Regional Studies
Michael Mensoian, Jr., Chairman
B.A., B.S.

Program emphasizes geography; four fields of concentration available - strongest environmental area is Regional, Urban and Planning Studies.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: NA
MAB concentrations: NA

Boston University

755 Commonwealth Avenue
Boston, MA 02215

Department of Biology
Ian Callard, Chairman
M.A., Ph.D.

Botany, ecology, and marine biology are represented
in depth. Behavior and sociobiology are emphasized.
Over forty faculty.

Admissions: Moderately difficult
Eng. language training: Program, course
No. foreign students: NA
MAB concentrations: 5,9

Clark University

950 Main Street
Worcester, MA 02215

Department of Biology
Rudolph F. Nunnemacher, Chairman
M.A., Ph.D.

Specialized aspects of botany, marine biology and
zoology are investigated. Emphasis on marine and
aquatic biology is possible.

Environmental Affairs Program
Harry E. Schwartz, Director
B.A., M.A.

Concentrations are offered in environmental planning
on the regional or urban level for land, water and
air in environmental monitoring and education.

Department of Geography
Saul B. Cohen, Graduate School of Geography
M.A., Ph.D.

Curriculum is patterned to focus on specialized programs in environmental management and behavior, urban geography, historical geomorphology and arid land forms, and coastal zone management.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 116
MAB concentrations: 3,5,12

Hampshire College

Amherst, MA 01002

Non-traditional academic program substituting certification, portfolio, and transcript for the more typical course and degree method. The program in Environmental Studies consists of an introductory core complemented with a final individual research project.

Admissions: Moderately difficult
Eng. language training: Counseling
No. foreign students: 12
MAB concentrations: NA

Harvard University

Cambridge, MA 02138

Organismic and Evolutionary Biology

Farish A. Jenkins, Chairman

Population biology ecology, ethology, forestry, tropical plants, soil biology, biogeography.

Department of Population Studies

Joe D. Wray, Acting Head

M.S., A.S.

Ecology and spatial distribution of population, environmental factors of population growth, population analysis in developing countries.

Admissions: Most difficult
Eng. language training: Course, program
No. foreign students: 1745
MAB concentrations: 1,2,11,12,14

Massachusetts Institute of Technology

Cambridge, MA 02139

Department of Urban Studies and Planning

Lawrence Susskind, Head

Master of City Planning

Environmental planning and design, planning and policy;
land use and growth management.

Department of Humanities

Program Officer, Room 20D-213

Program in science, technology and society. Ethical
and historical review: study of science in industrial
culture.

Environmental Studies

Office of the Provost

Undergraduate program offered through a variety of
interdepartmental projects.

Admissions: Most difficult

Eng. language training: Course

No. foreign students: 1488

MAB concentrations: 10,14

Northeastern University

360 Huntington Avenue

Boston, MA 02115

Department of Biology

Henry O. Werntz, Chairman

M.S., Ph.D.

Biology, botany, ecology, and zoology. Specialized
research in aquatic ecology, ichthyology, salt marshes
ecology, etc.

Admissions: Moderately difficult

Eng. language training: Program, course, counseling

No. foreign students: 1000

MAB concentrations: 5,11

Southeastern Massachusetts University
North Dartmouth, MA 02747

Department of Biology
Francis X. O'Brien, Chairperson
B.S., M.S.

Marine biology option at the graduate level specializes in studies of estuaries and near shore waters. The undergraduate program has a coastal zone ecology option.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 74
MAB concentrations: 5

University of Massachusetts, Amherst
Amherst, MA 01003

Botany
Edward L. Davis, Head
M.A., M.S., Ph.D.

Ecology is one of the emphases. Sample courses: plant physiology, morphology, autoecology, coast and land plant studies.

Forest and Wood Technology
Donald R. Proguiske, Head
M.S., Ph.D.

Areas of specialization: soils ecology, silviculture, management, economics, planning and management.

Plant Pathology
Richard A. Rohde, Head
M.S., Ph.D.

Experimental station facilities available. Forests, plant, shade tree pathology; host-pathogen relations.

Wildlife and Fisheries Biology
Donald R. Proguiske, Head
M.S., Ph.D.

Staff and facilities support upland wetland areas biology program; estuaries and fisheries research.

Zoology
John D. Palmer, Head
M.S., Ph.D.

Population biology and genetics; limnology, ecology, statistics.

Admissions: Moderately difficult
Eng. language training: Course, counseling
No. foreign students: 496
MAB concentrations: 2,3,5,9,11

Williams College

Williamstown, MA 02167

Center for Environmental Studies

Thomas Jorling, Director

B.A.

Program draws on environmental analysis laboratory,
a resource for research programs; environmental documents
library; and a 1600-acre memorial hardwoods forest.

Admissions: Most difficult
Eng. language training: None
No. foreign students: 27
MAB concentrations: 2

Worcester Polytechnic Institute

Worcester, MA 01609

Division of Interdisciplinary Affairs

James S. Demetry, Head

B.S.

An interdisciplinary program in urban and environmental
planning. Consists of core, orientations such as
urban/regional planning, environmental resource planning,
land use, or site planning.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 210
MAB concentrations: NA

MICHIGAN

Calvin College

Grand Rapids, MI 49506

School of Natural Resources

Alan Gebben, Advisor

Cooperative degree program

A combined curriculum, 3/2 program in forestry with the University of Michigan. Completion of first year at Michigan results in B.S. in Forestry from Calvin College. Michigan grants its degree upon completion of the second year.

Admissions: Moderately difficult

Eng. language training: Course

No. foreign students: 0

MAB concentrations: NA

Central Michigan University

Mount Pleasant, MI 48859

Department of Biology

Lawrence D. Koehler, Chairperson

M.S.

Subjects include fishery biology, aquatic insects, freshwater algae, aquatic zoology, limnology, aquatic plants, wildlife biology, dendrology, and wetland ecology.

Admissions: Moderately difficult

Eng. language training: Course, counseling

No. foreign students: 97

MAB concentrations: 2,5

Grand Valley State Colleges

Allendale, MI 49401

College of Arts and Sciences

B.S., Environmental Science

Program has seven areas of specialization: environmental and regional planning; resource management; ecosystem analysis; monitoring; health technology; natural history interpretation; education.

Urban and Environmental Studies Program

Adrian Tinsley, Dean

B.S.

Multidisciplinary program changing from year to year, emphasizing planning policy, impact assessment, environmental advocacy and conservation management.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 142
MAB concentrations: NA

Hope College
Holland, MI 49423

Environmental Health Sciences
Jack Shubert
B.A.

Traditional sciences majors with a nucleus of courses dealing with environmental problems. Program strength is in health sciences. Introduction to basic principles of toxicology, environmental chemistry; internships for well prepared science students.

Admissions: Moderately difficult
Eng. language training: Course, counseling
No. foreign students: 55
MAB concentrations: NA

Lake Superior State College
Sault Ste. Marie, MI 49783

Department of Biological Sciences
Gale R. Gleason, Head
B.S. Fisheries and Wildlife Management, Environmental Science

Strong emphasis is placed on field studies. Associate professor coordinates science program (core and electives in hydrology, limnology, climatology, soils, and land forms).

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 99
MAB concentrations: 5

Michigan State University
East Lansing, MI 48824

College of Agriculture and Natural Resources
Department of Fisheries and Wildlife
Niles Kevern, Chairman
M.S., Ph.D.

Conservation education, game or fish management, limnology, pollution biology.

Department of Entomology
James E. Bath, Chairperson
M.S., Ph.D.

Aquatic and forest entomology. Control technologies, systemics, and toxicology.

Department of Fisheries and Wildlife
Niles R. Kevern, Chairperson
M.S., Ph.D.

Options in management, administration, or specialty programs.

Institute of Water Research
Thomas H. Bahr, Associate Professor and Director
Wastewater, terrestrial irrigation and lake studies.

Pesticide Research Center
Fumio Matsumura, Director
Applied pesticide research and pesticide alternatives.

Department of Recreation Resources
Louis Twardzik, Chairman
M.S., Ph.D.
Administration or environmental interpretation.

Department of Resource Development
Raymond Vlasin, Chairman
M.S., Ph.D.
Resource economics and policy, land and water resources management, and regional development.

College of Natural Science
Department of Entomology
James Bath, Chairman
M.S., Ph.D.

Areas of study include economic entomology, toxicology,
pest management, and pesticide chemistry.

College of Social Science
Department of Geography
Lawrence Sommers, Chairman
M.S., M.A., Ph.D.

Program areas include economics, environmental quality,
natural resources, population, remote sensing, and
urban studies.

Admissions: Moderately difficult
Eng. language training: Program, course, counseling
No. foreign students: 1259
MAB concentrations: 1,2,5,9,11,12,14

Michigan Technological University
Houghton, MI 49931

School of Forestry and Wood Sciences
Eric A. Bourdo, Jr., Dean
B.S., M.S. Forestry

Degree programs consist of a core with options in
forest management, land surveying, natural resource
management, urban forestry, forest business, and wildlife
ecology.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 137
MAB concentrations: 2,11

University of Michigan, Ann Arbor
Ann Arbor, MI 48109

Department of Botany
M.S., Ph.D.

Limnology, tropical habitats and organisms, lake community ecology, tropical biology, aquatic ecology, fish adaptation.

Natural Resources

J. Johnsen, Dean

M.S. Conservation, Fisheries, Forestry, Wildlife Management
Outdoor recreation, resources ecology, resource policy, resource systems management. Aspects of forest, lake, fish, plant and resource research.

Department of Psychology

General Psychology Program (environmental focus)

Ph.D.

Studies the cognitive factors of natural environments; environmental perception.

Water Resources

Program Committee

M.S.

Technological and socioeconomic concepts for environmental and water resource problems; interdepartmental.

Admissions: Very difficult

Eng. language training: Course, program

No. foreign students: 2048

MAB concentrations: 1,2,5,11,13

Wayne State University

Detroit, MI 48202

Department of Biology

John D. Taylor, Chairman

210 Science Hall

B.A. Biology, B.S., M.S., Ph.D.

Aquatic biology or ecology can be selected as areas of specialized research.

Admissions: Moderately difficult

Eng. language training: Program, course

No. foreign students: 485

MAB concentrations: 5,11

Western Michigan University
Kalamazoo, MI 49008

Center for Environmental Affairs

Robert W. Kaufman, Director

B.A., M.A., Minor degree in Appropriate Technology

The Center gives unity and direction to a variety of programs with environmental concerns; e.g., urban and regional planning, earth science, cultural resource management, science education, homesteading and outdoor education. New programs in appropriate technology, future studies, and water management planned.

Admissions: Moderately difficult

Eng. language training: Program, course, counseling

No. foreign students: NA

MAB concentrations: 10,11,13

MINNESOTA

Morehead State University

Morehead, MN 56560

Agronomy and range management.

Admissions: Moderately difficult

Eng. language training: Course, counseling

No. foreign students: 77

MAB concentrations: 3

University of Minnesota, Twin Cities

Minneapolis, MN 55455

Agricultural Engineering

Arnold M. Flikke, Head

M.S., Ph.D.

Agronomy

Herbert W. Johnson, Head

M.S., Ph.D.

Pasture and grassland crops, weed science.

Botany

Douglas C. Pratt, Head

M.A., M.S., Ph.D.

Freshwater, plant and algae studies.

Ecology

Margaret B. Davis, Head

M.S., Ph.D.

Plants, ethology, population, limnology, aquatic and freshwater algae, soils.

Entomology, Fisheries and Wildlife

Milton W. Weller, Head

M.S. Ph.D.

Aquatic and forest entomology, integrated pest control management, fishery ecology of polluted waters.

Forestry

Rich A. Skok, Dean

Emphasis on ecology and silviculture, forest economics, genetics and forest management, hydrology, recreation, land management, remote sensing. Several research stations.

Plant Breeding

Donald C. Rasmussen, Director

M.S., Ph.D.

Genetic studies of improvement.

Plant Pathology

Francis A. Wood, Head

M.S., Ph.D.

Forest, aquatic, and plant studies; emphasis on mycology.

Plant Physiology

William A. Brun

M.S., Ph.D.

Classification and metabolism studies; autecology, weed control.

Soil Science

William P. Martin, Chairman

M.S., Ph.D.

Genesis and classification, chemistry and fertility, microbiology, macroclimatology, soil physics, forest soils.

Admissions: Very difficult
Eng. language training: Course, program, counseling
No. foreign students: 1600
MAB concentrations: 2,3,5,9,11,13

MISSISSIPPI

Mississippi State University Mississippi State, MS 39762

College of Agriculture and Home Economics
Charles E. Lindley, Dean
B.S. Agronomy, Entomology, B.S., M. Agriculture, M.S.,
Ph.D. Plant Pathology or Weed Science
Agriculture and science option in Department of Entomology; cooperative research with Boll Weevil Research Laboratories. Specialized training in pest management with other departments.

School of Forest Resources

J. Charles Lee, Dean

B.S.

Composed of several departments. A research station supplements the program with wildlife and forestry programs in the field.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 242
MAB concentrations: 2,9

University of Mississippi University, MS 38677

Department of Biology
Associate Professor Edmund D. Keiser, Chairman
214 Biology Building
M.S., Ph.D.

Program in marine biology encompasses fisheries biology,
salt marsh ecology, aquaculture, and limnology.

Admissions: Moderately difficult
Eng. language training: Course
No. foreign students: 254
MAB concentrations: 5

University of Southern Mississippi
Hattiesburg, MS 39401

Department of Industrial Technology
College of Technology and Science
C. Howard Heiden, Chairman
B.S.

Major in environmental technology with emphasis on
environmental technology and health, industrial hygiene,
or sanitation.

Department of Geography and Area Development
College of Liberal Arts
William M. Roberts, Chairman
B.S., M.A., M.S., Ph.D.

Major in community and regional planning with an emphasis
on urban and transportation planning or environmental
planning. Practical training; coursework in urban,
transport, and environmental planning, as well as
behavioral sciences.

Admissions: Less difficult
Eng. language training: Program
No. foreign students: 108
MAB concentrations: 10,11

MISSOURI

Central Missouri State University
Warrensburg, MO 64093

School of Applied Sciences and Technology

Thomas R. Gaines, Dean

B.S. Agronomy, Soil Conservation

The curriculum in soil conservation deals with the impact of crops and animal activity on soil management.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 341

MAB concentrations: 3

Northeast Missouri State University

Kirksville, MO 63501

Division of Practical Arts

Roland F. Nagel, Division Head

B.S., Agronomy

Core with soil science, weed, and pest control electives.

Division of Science

Dean A. Rosebery, Head

B.S. Environmental Science

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 139

MAB concentrations: 9

Northwest Missouri State University

Mayville, MO 64468

Department of Agriculture

John C. Beeks, Chairman

B.S., Agronomy

Emphasis on crop and soil science with supporting work in the natural and other sciences. Soil conservation, seed, fertilizer, and agricultural chemical production are some relevant areas.

Admissions: Moderately difficult
Eng. language training: Program
No. foreign students: 105
MAB concentrations: 9

St. Louis University

St. Louis, MO 63103

Center for Urban Programs
George Wendel, Director
M.A., Urban Affairs

Admission: Moderately difficult
Eng. language training: Course, program
No. foreign students: 0
MAB concentrations: 12

Southwest Missouri State University

Springfield, MO 65802

School of Science and Technology
Clifton C. Thomson
B.S., Environmental Chemical Technology

Department of Agriculture
John D. Schatz
B.S. Plant and Soil Science, Wildlife Conservation and
Management

Admissions: Moderately difficult
Eng. language training: Course
No. foreign students: 96
MAB concentrations: 9

University of Missouri, Columbia

Columbia, MO 65201

Agricultural Engineering
C. Leroy Day, Chairman
M.S., Ph.D.

Bioagronomy, soil and water control, pest control,
agricultural pollution, and water quality research.

Agronomy

C.A. Runge, Chairman

M.S., Ph.D.

Concentration on crops, soils, or genetics for M.S.
Doctoral work in: crop breeding and genetics, physiology
and management, soil chemistry and biochemistry, soil
pedology, mineralogy, soil-plant relationships, and
weed science.

Biological Sciences

Abraham Eisenstark, Director

M.A. (thesis and non-thesis), Ph.D.

Comparative ethology--ecosystems analysis and ecology,
limnology, plant science. Special facilities: herbarium
specializing in desert ecology, agrohydrology, and
a botany preserve of woody plants.

Entomology

Mahlon L. Fairchild, Chairman

M.S., Ph.D.

Emphasis on biological and chemical control, ecology,
forest entomology, host-plant relationships, insecticide
research, toxicology. Several experimental stations.

Forestry, Fisheries and Wildlife

Donald P. Duncan, Director

M.S., Ph.D. Forestry; M.S., Ph.D. Fisheries and Wildlife

Ecology, economics, entomology, genetics, land use,
recreation, silviculture, soils, wood science. In
conjunction with USDA Forest Research Center.

Plant Pathology

Robert N. Goodman, Chairman

M.S., Ph.D. (in cooperation with Pathology Department)

Ultrastructures research bearing on host-pathogen
ecology of soil-borne pathogens; fungi.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 800

MAB concentrations: 2,3,4,5,9,11,14

Washington University
St. Louis, MO 63130

Division of Biology and Biomedical Sciences
W. Maxwell Cowan, Director
M.S., Ph.D.

Programs in plant biology, evolutionary biology and
ecology at the organismic and population levels.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 402
MAB concentrations: 10,11

William Jewel College
Liberty, MO 64068

Cooperative program in forestry.

Admission: Very difficult
Eng. language training: None
No. foreign students: 5
MAB concentrations: NA

MONTANA

Montana State University
Bozeman, MT 59717

Department of Plant and Soil Science
K.C. Feltner
M.S. Agronomy, M.S., Ph.D. Crop and Soil Science

Department of Biology
J.M. Pickett
M.S., Ph.D. Botany; M.S., Ph.D. Entomology; M.S., Ph.D.
Fish and Wildlife Management

Plant Pathology
E.L. Sharp
M.S., Ph.D.

Agricultural Engineering
W.E. Larsen
M.S.

Department of Animal and Range Science
E.L. Blackwell
M.S., Range Science
Renovation, chemicals in agriculture, revegetation,
field measurement, grazing influence, fertilization,
inventory.

Admissions: Noncompetitive
Eng. language training: None
No. foreign students: 81
MAB concentrations: 3,5,9,11

University of Montana
Missoula, MT 59801

Department of Environmental Studies
R.E. Erickson, Coordinator
M.S., Environmental Science

Department of Wildlife Biology
W. Leslie Pengelly
B.S.

Terrestrial and aquatic options. In cooperation with
the Montana Forest and Conservation Station. Limnology
and plants.

School of Forestry
Robert F. Wambach, Dean
B.S., M.S., M. Forestry, Ph.D.

Resource management, forest business, range and wildlife
habitat, in cooperation with research station.

Admissions: Noncompetitive
Eng. language training: None
No. foreign students: 80
MAB concentrations: 2,3,5

NEBRASKA

Kearney State College

Kearney, NE 68847

School of Natural and Social Studies

R.D. Clark, Dean

B.A., B.S.

General interdisciplinary program exploring many aspects of environmental problems; options available in biology, environmental management, wildlife.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 35

MAB concentrations: NA

University of Nebraska

Lincoln, NE 68508

Agronomy

F.A. Haskins, Chairman

M.S., Ph.D.

Graduate programs may be developed in plant breeding and genetics, soil sciences, crop physiology and production, forage and range management, and weed sciences.

Entomology

Elvis Dickason, Chairman

M.S., Ph.D.

Work is offered in the divisions of ecology, taxonomy, morphology, physiology, toxicology, economics, insect transmissions of plant pathogens, insect pathology, and pest management.

Horticulture and Forest

M.D. Ferrill, Chairman, M.S., Ph.D.

Graduate programs available in agricultural climatology, and in the physiological, genetic, morphological and environmental aspects of the production and utilization of horticultural and forestry crops.

Admissions: Noncompetitive
Eng. language training: Course, counseling
No. foreign students: 598
MAB concentrations: 2,9,11

University of Nebraska, Omaha
Omaha, NE 68132

Department of Biology
Paul V. Prior, Head
M.A., M.S.

Students may conduct thesis research in animal behavior, ecology, entomology, freshwater biology, ichthyology, parasitology, plant anatomy, plant systematics, plant morphology.

Department of Public Administration
Harry W. Reynolds, Jr., Head
M.P.A.

Environmental option.

Admissions: Noncompetitive
Eng. language training: Course, counseling, program
No. foreign students: 147
MAB concentrations: 5,9

NEVADA

University of Nevada, Reno
Reno, NV 89557

College of Agriculture
Dale W. Bohmont, Dean
B.S., M.S., Ph.D.

Three divisions--agricultural and renewable resources economics; plant, soil and water science; renewable natural resources. Specialization opportunities (for example, thesis preparation in forestry, wildlife, range, watershed, or recreation management within natural resources division).

Department of Biology
Robert Warren Mead
B.S., Ecology

Core and electives selected with advisors.

School of Mines
Arthur Baker III, Dean
B.S., M.S., Ph.D.

Geological engineering, hydrology and hydrogeology majors.
Water and renewable natural resources.

Desert Research Institute established in 1960; programs
on bioresources, energy, water, and atmospheric sciences.

Admissions: Moderately difficult
Eng. language training: Program
No. foreign students: 240
MAB concentrations: 2,3,4,5,6,9,10

NEW HAMPSHIRE

Dartmouth College
Hanover, NH 03755

Department of Biology
Robert D. Allen, Chairman
B.A., M.A., Ph.D.

Department encourages modified major programs for under-
graduates. At the graduate level, marine and aquatic
biology, terrestrial ecology, and tropical plant studies
are available.

Environmental Studies Program
Gordon J.F. McDonald, Director
Interdisciplinary studies for undergraduates.

Admissions: Most difficult
Eng. language training: None
No. foreign students: 96
MAB concentrations: 1,5,6,11

University of New Hampshire
Durham, NH 03824

Institute of Natural and Environmental Resources
David P. Olsen, Director
M.S., Natural and Environmental Resources
Forest resources, hydrology, resource management, soil
science, resource administration, wildlife ecology.
Ph.D. possible in cooperation with the Department of
Chemistry in the field of soil and water chemistry.

Entomology
G. Thomas Fisher, Chairman
M.S.
Taxonomy, ecology, ethology, biological control, pest
management.

Plant Science
Lincoln S. Pierce, Chairperson
M.S., Ph.D.
Breeding and genetics, physiology and biochemistry.

Botany and Plant Pathology
A. Linn Bogle, Chairperson
M.S., Ph.D.
Production, physiology and pathology.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 121
MAB concentrations: 2,3,9

NEW JERSEY

Glassboro State College
Glassboro, NJ 08028

Environmental Studies
F. Gary Peterson, Advisor
B.A., M.A.

A program of concentration available to students in any major: education, science, planning, health, or technology tracks.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 45
MAB concentrations: NA

Rutgers University
New Brunswick, NJ 08903

Agricultural Engineering
D. Mears, Director of Graduate Program
Studies in the conservation of natural resources, land use, and effect of specific environments on natural resources.

Ecology
C. Leck, Director of Graduate Program
M.S., Ph.D.
Environmental biology, plant and animal ecology, limnology, microbial biology, and human ecology.

Entomology and Economic Zoology
H. Streu, Director of Graduate Program
M.S., Ph.D.
Economic entomology, toxicology, insect ecology, pesticide and residue chemistry.

Environmental Science
A. Kaplovsky, Director
M.S., Ph.D.
Interaction of pollutants and their relation to the conservation of resources.

Plant Pathology
J. Peterson, Director
M.S., Ph.D.
Economic plant pathology, air pollution, and host-plant relationships.

Soils and Crops

L. Douglas, Director

M.S., Ph.D.

Soil and weed sciences research. Much of the department's emphasis is on environmental quality.

Marine Sciences

Norbert P. Psuty, Director of the Center for Coastal and Environmental Studies

Busch Campus

Research institute for analyzing aspects of marine productivity, estuarine systems, aquaculture, water quality, and other topics. Its function is subsidiary to and cooperative with other university divisions.

Admissions: Moderately difficult

Eng. language training: Program, course

No. foreign students: 661

MAB concentrations: 1,5,9,11,12,14

Upsala College

East Orange, NJ 07019

Cooperative Program in Forestry and Environmental Management

Barry E. Abrams, Dean

Cooperative degree program

Cooperative 3/2 program with Duke University. Upon completion of first year of Duke's Forestry program, Upsala confers a B.A. or B.S. degree. Upon completion of program, Duke confers Master of Forestry or Master of Environmental Management.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 10

MAB concentrations: NA

William Paterson College of New Jersey

300 Pompton Road

Wayne, NJ 07470

Environmental Studies Program

Edwin C. Hutter, Coordinator

B.S.

Core with stress on environmental studies within an established curriculum division, such as economics. Multipdisciplinary.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 45
MAB concentrations: NA

NEW MEXICO

New Mexico Institute of Mining and Technology Socorro, NM 87801

Department of Hydrology
Marc Bodine, Head, Department of Geoscience
B.S., M.S., Ph.D.
Water quality modelling, regional hydrology, aquifer simulation, dispersion, wells, water resource evaluation and management.

Admissions: Very difficult
Eng. language training: Course
No. foreign students: 61
MAB concentrations: 5,11,14

New Mexico State University Las Cruces, NM 88003

Agronomy
N.R. Malm, Acting Head
B.S., M.S., Ph.D.
Crop, soil, and general emphasis is possible. Special attention is placed on weed science, genetic improvement of grasses, and soil and water problems.

Animal and Range Science
A.B. Nelson, Head
M.S., Ph.D.

Land use impact, grazing, range nutrients and ecology,
and noxious range plant control are investigated.

Fishery and Wildlife Sciences

S.D. Schemnitz, Head

M.S., Wildlife Sciences

Management of animal types, limnology, reservoir ecology,
and freshwater fisheries.

Admissions: Moderately difficult

Eng. language training: Program, course

No. foreign students: 287

MAB concentrations: 3,5

NEW YORK

City University of New York

33 West 42nd Street

New York, NY 10036

Department of Biology

Louis G. Moriber

Room 200H, Ingersoll Extension

Brooklyn College, Bedford Avenue & Avenue H

Brooklyn, NY 11210

Oceanographic and ecological studies including aspects
of limnology and fisheries.

Department of Psychology

Florence Denmark, Chairperson

Concentration in environmental psychology is offered.

Perception and cognition, social behavior.

Admissions: Moderately difficult

Eng. language training: Program, course

No. foreign students: 336

MAB concentrations: 5,13

Cornell University
Ithaca, NY 14853

Agricultural Engineering

G.E. Rehkugler, Representative

M.S., Ph.D., M.P.S. (non-thesis professional degree)

Agricultural structures (environmental composition and control); waste management (ecosystems analysis, land disposal, pest management systems); soil and water engineering (hydrology, tropical water management, land use, soil stabilization).

Agronomy

Ralph L. Obendorf, Representative

M.S., Ph.D.

Tropical crops and soil, soil fertility, soil and water conservation, aquatic environments and plants, crop ecology, weeds and herbicides; atmospheric sciences, field crop science, seed technology areas. One of the most modern and diversified programs.

Botany

W.J. Dress, Representative

M.S., Ph.D.

Plant ecology, morphology, botany, anatomy; physiological ecology, population studies, water relations, aquatic and marine ecology, productivity, water-use efficiency.

Ecology and Evolutionary Biology

Peter F. Brussard, Representative

M.S., Ph.D.

Microbial ecology, biological oceanography, freshwater invertebrate bionomics, ecophysiology, population ecology.

Environmental Quality

R.C. Loehr, Representative

Minor degree program

Encourages interdisciplinary study; to be linked to major fields of study for engineers and scientists.

International Agricultural and Rural Development

J.F. Metz, Jr., Representative

M.P.S. (Agriculture) - non-thesis professional degree

Minor intended for international students as well as U.S. students, planned specifically for those majoring in other fields in agriculture and the life sciences.

Agronomy, rural sociology, entomology, food sciences,
pathology, economics, plant breeding.

Natural Resources

R.T. Oglesby, Representative

M.S., Ph.D., M.P.S.

Aquatic science, fishery science, wildlife, natural
resources conservation, forest conservation. Labora-
tories and resource information library. Ecology of
wetlands, fisheries management, aquaculture, bird ecology,
wildlife-agriculture relationships, forestry, limnology,
water chemistry, recreation policies.

Plant Pathology

O.C. Yoder, Representative

M.S., Ph.D.

Pathology, mycology, tropical plants; pest management
and breeding for resistance; plant protection and plant
disease.

Department of Sociology

Joseph A. Kahl, Representative

M.A., Ph.D.

Majors are possible in demography-ecology, social organi-
zations and change.

Water Resources

Charles D. Gates, Graduate Faculty Representative

Minor degree program

To be pursued in coordination with a major field of
study. Aerial photographic studies, remote sensing,
planning, environmental systems engineering, natural
resources conservation, soil and water engineering are
commonly chosen major fields of study.

Admissions: Most difficult

Eng. language training: Course, program, counseling

No. foreign students: 740

MAB concentrations: 1,2,5,9,11,12,14

Eisenhower College of R.I.T.
Seneca Falls, NY 13148

Environmental Studies Program
Gary Miller, Coordinator
B.S.

Interdisciplinary program with option in the pure and applied sciences. A wildlife preserve and refuge are available for field work.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 9
MAB concentrations: NA

Hofstra University
Hempstead, NY 11550

Department of Earth Resources
Dennis Radcliffe, Chairperson
B.S.

Interdisciplinary program exposing the conflicts of modern development and the interests of conservation.

Admissions: Moderately difficult
Eng. language training: Course, program, counseling
No. foreign students: 70
MAB concentrations: NA

New York University
100 Washington Square
New York, NY 10003

Department of Biology
Fleur Strand, Director of Graduate Studies
952 Brown Building
M.S., Ph.D.

Opportunities for specialization in many fields including ecology, fish biology, forest biology, aquatic biology, and plant biology. Both lab and field facilities are available.

Environmental Health Sciences
Norton Nelson, Director, Institute of Environmental Medicine
550 First Avenue, NY, NY 10016
M.S., Ph.D.

Primarily involved in cancer research; also examines pollution and contaminants, estuary and aquatic ecology.

Admissions: Very difficult
Eng. language training: Program, course, counseling
No. foreign students: 1691
MAB concentrations: 2,5,14

Rensselaer Polytechnic Institute
Troy, NY 12181

Center for Urban and Environmental Studies
Paul B. Zuber, Chairman
M.S., Ph.D.

Interdisciplinary center with architecture, engineering, humanities and social sciences, management, science faculty. Individual plans of study designed with an advisor.

Rensselaer Fresh Water Institute at Lake George
Nicholas L. Clesceri, Director

Multidisciplinary studies in ecosystem classification, rain water, and sewage flow and treatment.

Center for Ecological Modeling
Computer simulation models in cooperation with U.S. and European governmental agencies.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 288
MAB concentrations: 5,10,11

State University of New York, Stony Brook
Stony Brook, NY 12901

Program in Ecology and Evolution
M.A., Ph.D.

The study of diverse groups of terrestrial and marine organisms in geographic regions ranging from the tropics

to the Arctic. Additionally, fresh and salt water studies are offered.

Marine Environmental Sciences Program

M.S.

Coastal zone management, specialized research on the effect of toxic chemical and electric power stations on coastal ecosystems. Interdisciplinary.

Admissions: Moderately difficult

Eng. language training: Course, counseling

No. foreign students: 500

MAB concentrations: 1,5,10,14

State University of New York, Syracuse

Syracuse, NY 13210

School of Environmental and Resource Management

Charles C. Larson, Dean

B.S., M.S., Ph.D.

Emphasis is on forest resources and associated open lands.

College of Environmental Science and Forestry

Graduate Program

M.S., Ph.D.

Remote sensing, environmental education, water resources, environmental assessment and impact analysis, land use planning; additional Ph.D. areas in forest management, policy and administration, economics, quantitative methods for land use planning, soil science, tree improvement, world forestry.

School of Biology, Chemistry, and Ecology

Stuart W. Tanebraum, Dean

M.S., Ph.D.

Specialized research in botany, forest pathology, and entomology.

Admissions: Most difficult

Eng. language training: None

No. foreign students: 67

MAB concentrations: 2,3,5,9,10

Syracuse University
Syracuse, NY 13210

State University College of Environmental Science and Forestry

Adjoins Syracuse University and closely associated with it. Cooperative, interdisciplinary programs. Forest biology, chemistry, forest engineering, landscape architecture, paper science and engineering, resources management, wood products engineering.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 987
MAB concentrations: 2,11,14

Union College
Schenectady, NY 12308

Environmental Studies
Phillip D. Snow, Advisor
Science core is applied to environmental problem areas.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 38
MAB concentrations: NA

NORTH CAROLINA

Appalachian State University
Boone, NC 28608

College of Arts and Sciences
William C. Strickland, Dean
Cooperative degree program
Forestry cooperative degree with North Carolina State University at Raleigh. First two years of program spent at Appalachian State University.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 25
MAB concentrations: NA

Catawba College

Salisbury, NC 28144

Cooperative Forestry Program

B.S.

A 3/2 program with Duke University; emphasis on resource production and management, resources science, or resource policy. At end of second year, Duke grants M. Forestry or M. Environmental Management degree.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 5
MAB concentrations: NA

Duke University

Durham, NC 27706

Forestry and Environmental Studies

Benjamin Jayne, Dean

M.A., M.S., Ph.D.

Resource science, management, and policy - measurements and statistics, methodologies for managers, wildlife studies, forest research station. Organization for Tropical Studies offers field program in Costa Rica.

Center for Demographic Studies

George C. Myers, Director

Ph.D. with either Department of Biology or Economics.

Admissions: Most difficult
Eng. language training: Course, counseling
No. foreign students: 192
MAB concentrations: 1,2,5,11,12

High Point College

High Point, NC 27262

3/2 cooperative program in forestry with Duke University, terminating in M. Forestry or M. Environmental Management degree.

Environmental Studies
Alfred S. Hassel, Director
B.S.

Core taken at High Point; environmental studies at Florida Institute of Technology. Areas include management, chemistry, urban and rural development, pollution analysis, wastewater systems, air pollution technology.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 17
MAB concentrations: 11,12,14

Lenoir-Rhyne College
Hickory, NC 28601

Cooperative program in forestry established with Duke University (3/2 program), terminating in M. Forestry or M. Environmental Management degrees.

Division of Natural Sciences and Mathematics
Robert L. Spuller, Chairman
B.S., Environmental Studies
Core and concentrations in energy, air, and water pollution.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 2
MAB concentrations: 14

North Carolina Agricultural and Technical State University
Greensboro, NC 27411

Department of Plant Science and Technology
Samuel J. Dunn, Chairman
B.S. Agricultural Science, Agricultural Technology, Landscape Architecture

Agronomy with an emphasis on plant, soil science or agricultural engineering. Earth and environmental sciences option.

Admissions: Less difficult
Eng. language training: None
No. foreign students: 132
MAB concentrations: NA

North Carolina State University, Raleigh
Raleigh, NC 27650

Department of Biological and Agricultural Engineering
F.J. Hassler, Head
M.S., Ph.D., M. Biological and Agricultural Engineering
Watershed hydrology, waste management, and pesticide application.

Department of Botany
G.R. Noggle, Head
M.S. Life Sciences (non-thesis), Ecology
Grasses, sedges, rushes, plant sciences.

Crop Science
B.E. Caldwell, Head
M.S., Ph.D.
Forage crops ecology, weed control, and plant sciences.

Ecology
M.S. Ecology, or as minor with other disciplines
Population biology, limnology, behavior, microbial ecology, terrestrial ecology, physiology, applied ecology, forests, pesticides, fisheries.

Entomology
K.I. Knight, Head
M. Agriculture, M.S., Ph.D.
Acarology, agricultural entomology, behavior, toxicology, ecology, pesticide analysis, pest management and taxonomy, population management. In cooperation with School of Forest Resources.

Forestry

C.B. Davey, Head
M.F., M.S., Ph.D.

Plant Pathology

R. Aycock, Head
M. Agriculture and Life Science (non-thesis), M.S., Ph.D.

Recreation Resources Administration

T.I. Hines, Head
M.S., M. Recreation

Soil Science

C.B. McCants, Head
M.S., Ph.D.

Water Resources

E.H. Wiser, Chairman
M.S., Ph.D. (minor degree)

Program of water law and institutions, planning of water resources and related programs, municipal and industrial water management, agriculture and forest water management. Aquatic biology, ecology, hydrology, and hydrogeology.

Admissions: Moderately difficult

Eng. language training: Course, program, counseling

No. foreign students: 620

MAB concentrations: 1,2,3,5,6,9,11

University of North Carolina, Chapel Hill

Chapel Hill, NC 27514

Ecology

Alan E. Stiven, Chairman
M.A., M.S., Ph.D.

Environment and anthropology, demography, plant ecosystematics, water and land resource planning, limnology, wetlands ecology, environmental assessment, population and resource geography, animal ecology, intertidal communities.

School of Public Health

Department of Environmental Sciences and Engineering

Daniel A. Okun

M.S., M.S.E.E., Ph.D.

Water sources, aquatic and wetlands ecology, limnology, water quality and treatment, air, radiation, and environmental management. An Institute for Environmental Studies will conduct interdisciplinary research activities with other departments.

Admissions: Most difficult
Eng. language training: Course, counseling
No. foreign students: 192
MAB concentrations: 5,10,11,12,14

University of North Carolina, Greensboro
Greensboro, NC 27412

Department of Biology
Bruce MacLean Eberhart, Head
M.A.
Terrestrial and aquatic ecology studies.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 47
MAB concentrations: 5

NORTH DAKOTA

North Dakota State University
Fargo, ND 58102

Agricultural Engineering
George L. Pratt, Chairman
M.S.
Soil and water conservation, noise and pollution control,
energy conservation.

Agronomy
Jack F. Carter, Chairman
M.S., Ph.D.

Crop production, crop physiology, weed science. plant breeding and genetics.

Entomology

John T. Schulz, Chairman

M.S., Ph.D.

Ecology, genetics, biological and biophysical control, economic entomology, pest management, and plant disease transmission.

Natural Resource Management

M.S.

Interdisciplinary program for employed professionals (others welcomed). Resource ecology, range, resources, fish and wildlife, prairies resources and forestry, recreation topics.

Plant Pathology

Richard L. Kiesling, Chairman

M.S., Ph.D.

Joint major with another department; program selected by student.

Soils

Charles M. Smith, Chairman

M.S., Ph.D.

Soil science and agricultural climatology. Soil and water management, fertility, soil chemistry, climatology.

Admissions: Noncompetitive

Eng. language training: None

No. foreign students: 140

MAB concentrations: 2,3,5,9,11

University of North Dakota

Grand Forks, ND 58202

Department of Biology

Robert W. Seabloom, Chairman

M.S., Ph.D.

Ecology concentrations; biological behavior, laboratories for limnology, fisheries biology, research stations

for aquatic research and woodland biology in upland and lowland prairies.

Admissions: Less difficult
Eng. language training: Course, counseling
No. foreign students: 223
MAB concentrations: 5

OHIO

Baldwin-Wallace College Berea, OH 44017

Cooperative Program in Forestry
John Amy, Admissions Director
A 3/2 cooperative program with Duke University in forestry.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 7
MAB concentrations: NA

Case Western Reserve University Cleveland, OH 44106

Department of Biology
Norman B. Rushforth, Chairman
B.A., B.S., M.A., M.S., Ph.D.
Phosphorus cycling in land-water systems, plankton growth and nutrient uptake, modelling of aquatic ecosystems, ecology and behavior of insects, species diversity and principles of island biogeography, and ecosystems of Lake Erie.

Admissions: Very difficult
Eng. language training: Program
No. foreign students: 350
MAB concentrations: 5,7

Cleveland State University
Cleveland, OH 44115

Department of Biology
Georgia E. Lesh-Laurie, Chairperson
M.S., Ph.D.
Ecosystems biology, limnology, water quality.

Admissions: Noncompetitive
Eng. language training: None
No. foreign students: 165
MAB concentrations: NA

Heidelberg College
Tiffin, OH 44883

Cooperative Program in Forestry
Arthur R. Porter, Jr., Dean
A 3/2 cooperative program with Duke University in forestry.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 2
MAB concentrations: NA

Miami University
Oxford, OH 45056

Institute of Environmental Science
Christopher E. Barthel, Jr., Director
Master of Environmental Science
Problem-solving core curriculum; multidisciplinary areas of concentration, research or internship. Environmental design, methodology, policy making and administrative coursework; concentrations in regional planning, impact analysis, air and water pollution control. 3/2 cooperative program in forestry with Duke University.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 129
MAB concentrations: 11

The Western College of Miami University
Oxford, OH 45056

Environmental Studies Program
Myron J. Lunine, Dean
B.A.

Individualized program coordinated by student,
advisor and faculty.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: NA
MAB concentrations: NA

Ohio State University
Columbus, OH 43210

Department of Agronomy
Berlie L. Schmidt, Chairman
M.S., Ph.D.

In addition to the typical soil and crop divisions,
specialization in environmental quality, agronomy in
developing countries, polar conditions, and urban develop-
ment is offered.

Department of Agricultural Economics and Rural Sociology
Emanuel D. Rudoph, Chairman
M.S., Ph.D.

International development and demography.

Department of Natural Resources
Joseph D. Kasile, Graduate Committee Chairman
Fisheries and wildlife management, forestry, parks and
recreation administration, resource development.

Admissions: Noncompetitive
Eng. language training: Course, program
No. foreign students: 1101
MAB concentrations: 2,3,5,10,11,12

Ohio University
Athens, OH 45701

Environmental Studies Program, Graduate College
John R. Collier, Associate Dean

M.S., Environmental Studies

Interdepartmental program; concentrations in biological sciences or physical earth sciences (with an engineering emphasis). Thesis and non-thesis options.

Admissions: Less difficult

Eng. language training: Program, course, counseling

No. foreign students: 722

MAB concentrations: 11

Wittenburg University
Springfield, OH 45501

Department of Biology

Ronald A. deLanglade, Chairman

Cooperative Program in Forestry

A 3/2 cooperative program with Duke University.

Admissions: Very difficult

Eng. language training: Course, counseling

No. foreign students: 23

MAB concentrations: NA

OKLAHOMA

Oklahoma State University
Stillwater, OK 74074

Agricultural Engineering

Jay G. Porterfield, Head

B.S., M.S., M. Engineering, Ph.D.

Hydrology, water resources, water quality, water treatment.

Agronomy

P.W. Santelman, Acting Head

M.S., B.S., Ph.D.

Range management and plant protection are among the areas included.

Wildlife Ecology

Calvin G. Beames, Jr., Chairman

B.S., M.S., Ph.D.

Undergraduate options in management, research communications, and law enforcement.

Entomology

D.C. Peters, Head

B.S., M.S., Ph.D.

Economic entomology and population manipulation are investigated.

Forestry

J. Edward Langwig, Head

B.S. Resource Management, M.S. Forestry

Forest recreation, forest science, urban forestry.

Plant Pathology

John E. Thomas, Head

B.S., M.S., Ph.D.

Qualifies students for positions with federal and state government.

Admissions: Moderately difficult

Eng. language training: Course, program, counseling

No. foreign students: 990

MAB concentrations: 2,3,5,9,11

Southeastern Oklahoma State University

Durant, OK 74701

Department of Biological Sciences

Earl B. Kirkpatrick, Chairman

B.S. Conservation

Options in conservation, wildlife, or recreation and resource management.

Admissions: Less difficult

Eng. language training: Course, counseling

No. foreign students: 297

MAB concentrations: NA

University of Oklahoma
800 N.E. 13th Street
Oklahoma City, OK 73104

Department of Human Ecology and Environmental Health
Raymond A. Mill, Chairman
M.S., M. Public Health, Ph.D.
Interdisciplinary approach to health and the environment.
Environmental sanitation, radiological health, occupa-
tional hazards, air quality, behavioral sciences, human
growth and development, social problems.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 1055
MAB concentrations: 10,11,12

OREGON

Oregon State University
Corvallis, OR 97331

Crop Science, School of Agriculture
William T. Cooney, Dean
B.S., M.S., M. Agriculture, Ph.D.
Scientific principles of soils, physics, chemistry,
botany and genetics. Areas of emphasis include crop
breeding, forage and pasture management, seed technology,
weed control.

Fisheries and Wildlife, School of Agriculture
William T. Cooney, Dean
B.S., M.S., M. Agriculture, Ph.D.
Ecological requirements of fish and wildlife; multiple
use of land and water. Graduate specialization in
water pollution biology, stream ecology, aquaculture,
marine and freshwater fish ecology.

Rangeland Resources, School of Agriculture

William T. Cooney, Dean

B.S., M.S., M. Agriculture, Ph.D.

Domestic or wild animals, range nutrition, range ecology,
range utilization and management.

Soil Science, School of Agriculture

William T. Cooney, Dean

B.S., M.S., Ph.D.

Science, business, soil conservation technology, land
appraisal.

Botany and Plant Pathology, College of Science

Robert W. Kraus, Dean

B.S., M.S.

Ecology, genetics, plant pathology, forest pathology,
parasitism. Pest management program with Departments
of Botany, Entomology and the School of Agriculture.

Entomology, College of Science

Robert W. Kraus

B.S., M.A., M.S., Ph.D.

Agricultural entomology, integrated pest management,
aquatic entomology, insect toxicology, insect ecology,
and insect-transmitted plant diseases.

Forest Engineering and Management, School of Forestry

Carl H. Stoltenberg, Dean

B.S., M.S., Ph.D., B.A., B. Forest Engineering

Management of human interventions upon forested lands;
biology, recreation management, range management, wild-
life management. Ecology, genetics, physiology, silvi-
culture.

Admissions: Moderately difficult

Eng. language training: Course, program

No. foreign students: 638

MAB concentrations: 2,3,6,9,11

Portland State University

P.O. Box 751

Portland, OR 97207

Environmental Sciences Program
Karl Dittmer, Coordinator
Ph.D.

Studies and research in biology, chemistry, or physics.
Interdepartmental direction; not intended to train
technicians but to produce skilled research scientists.

Admissions: Moderately difficult
Eng. language training: Program
No. foreign students: 407
MAB concentrations: NA

Reed College
Portland, OR 97202

Cooperative Forestry Program
A 3/2 cooperative program with Duke University.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 26
MAB concentrations: NA

Willamette University
Salem, OR 97301

B.S. Environmental Sciences
A 3/2 cooperative forestry program with Duke University.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 19
MAB concentrations: NA

PENNSYLVANIA

Albright College
Reading, PA 19603

Forestry cooperative program

Dr. Edwin L. Bell, Advisor

A 3/2 cooperative program with Duke University.

Admissions: Very difficult

Eng. language training: None

No. foreign students: 35

MAB concentrations: NA

Allegheny College

Meadville, PA 16335

Cooperative Forestry Program

Cooperative program with the University of Michigan
or Duke University.

Aquatic Environments

Samuel Sterrett, Director

Interdisciplinary program: relationship of physical
and human environments and fresh water.

Admissions: Very difficult

Eng. language training: None

No. foreign students: 10

MAB concentrations: 5

Delaware Valley College of Science and Agriculture

Doyleston, PA 18901

Agronomy

Julian Prundeanu, Chairman

B.S.

Soil formation, fertility, soil and water conservation,
pesticides.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 3

MAB concentrations: 9

Drexel University

32nd and Chestnut Streets
Philadelphia, PA 19104

Environmental Science and Engineering Program
P. Walton Purdom, Director
M.S. Environmental Engineering, Environmental Science,
Ph.D.

Multidisciplinary program with concentrations including health sciences, planning and management, air resources, occupational health, water resources, solid wastes, food sciences. Undergraduate engineering or B.S. degree required.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 272
MAB concentrations: 11

Elizabethtown College

Elizabethtown, PA 17022

Cooperative Forestry program
Ronald L. Laughlin, Associate Professor
A 3/2 cooperative program with Duke University.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 13
MAB concentrations: NA

Franklin and Marshall College

Lancaster, PA 17604

Cooperative Forestry program
Carl Pike, Contact
A 3/2 cooperative program with Duke University.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 17
MAB concentrations: NA

Gettysburg College

Gettysburg, PA 17325

Cooperative Forestry program

A 3/2 cooperative program with Duke University.

Admissions: Very difficult

Eng. language training: None

No. foreign students: 1

MAB concentrations: NA

Juniata College

Huntington, PA 16652

Cooperative Forestry program

Jodd D. Gustafson, Biology

A 3/2 cooperative program with Duke University.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 9

MAB concentrations: NA

Lebanon Valley College

Annville, PA 17003

Cooperative Forestry program

Steven E. Williams, Biology

A 3/2 cooperative program with Duke University.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 24

MAB concentrations: NA

Lehigh University

Bethlehem, PA 18015

Department of Environmental Sciences and Resource Management

Edward Evenson, Director

B.S.

Interdepartmental major; Center of Marine and Environmental Studies participates.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 129
MAB concentrations: 5

Mercyhurst College
Erie, PA 16501

Department of Environmental Studies
B.A.

Interdisciplinary program with core and electives.
Fish, game, and wildlife management.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 11
MAB concentrations: NA

Moravian College
Allentown, PA 18018

Cooperative Forestry program
John M. Bevington, Advisor
A 3/2 cooperative program with Duke University.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 12
MAB concentrations: NA

Muhlenburg College
Allentown, PA 18104

Environmental Sciences Program
Robert Wagner, Head
B.S.

Interdisciplinary program. Also a 3/2 cooperative forestry program with Duke University.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 9
MAB concentrations: NA

Pennsylvania State University
University Park, PA 16802

College of Agriculture, Resource Management Program
John R. Daugherty, in charge
B.S.

Emphasizes the management of renewable natural resources which are essential for agriculture, forestry, wildlife, recreation, home sites, and aesthetic enjoyment. Wildlife, strip mining areas.

College of Arts and Architecture, Landscape Architecture program

David L. Young, Chairman

Concerned with land use and physical appearance. Four-year preprofessional B.S. or a five-year B.L.A. degree.

College of Earth and Mineral Sciences, Earth Sciences Program

E. Willard Miller, Head

B.S.

Activities include gathering and evaluating data on environmental management and coordination of programs in environmental control and modification, and industrial and government planning.

College of Health, Physical Education, and Recreation

Patricia Farrell, Head

B.S., M.S., M.E.D.

Recreation and parks program prepares students for administrative leadership positions. Interpretive services, outdoor recreation services.

Environmental Pollution Control Program

John B. Nesbitt, in charge

M.S., M.E.P.C., M. Engineering

Air and water pollution and solid wastes program. Interdisciplinary faculty.

Agronomy Department
James L. Starling
B.S., M.S., M. Agriculture, Ph.D.
Soil and resources quality and conservation.

Entomology Department
Charles W. Pitts, Jr., Head
B.S., M.S., M. Agriculture, Ph.D.
Technologies for managing insect populations.

Plant Science Department
William Merrill, in charge
B.S.
Interdisciplinary program in plant science, ecology,
genetics, disease and weed problems.

School of Forest REsources
Robert S. Bond, Director
B.S.
Forest products (properties of raw materials, application
of production technologies, evaluation of product proper-
ties); forest science.

Ecology Department
Frederick M. Williams, in charge
M.S., Ph.D.
Core areas augmented by student-designed program
of study.

Energy Sources and Utilization
Howard B. Palmer, Program Chairman
M.S.

Man-Environment Relations
Sid ey Cohn, Director of Division
Ph.D., M.S., M.E.D.
Integrated interdisciplinary study of human social
biological, and environment systems.

Plant Pathology
Samuel Smith, Department Head
M.S., M. Agriculture, Ph.D.
Ecology and physiology of air pollution injury. Biologi-
cal and chemical control of plant disease.

Wildlife Management
Wilber W. Ward, Director, School of Forest Resources
M.S.

Wildlife ecology, land use, habitat management,
aesthetic values.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 961
MAB concentrations: 2,5,9,10,11,12,13,14

University of Pennsylvania
Philadelphia, PA 19104

Department of Biology
Shinya Inoue, Chairman
M.S., Ph.D.

A broad range of specialized topics is covered. Tropical
biology studies are conducted in Costa Rica and at the
Smithsonian Tropical Research Institute in Panama.
Limnological, ecological, and botanical biology
are also available.

Department of Energy Engineering
Lawrence Eisenberg, Chairman
M.S.E.

The science and technology of production, distribution,
and utilization of conventional and non-conventional
forms of energy. Major areas of emphasis are energy
systems, conversion, and solar energy, all from an en-
vironmental perspective.

Energy Management and Policy Program
Lawrence Eisenberg, Chairman
Ph.D.

Study of the scientific, managerial, environmental,
social, and economic aspects of energy policy.

Admissions: Very difficult
Eng. language training: Program, course, counseling
No. foreign students: 1261
MAB concentrations: 1,5,10,11,14

RHODE ISLAND

Brown University

Providence, RI 02912

Department of Sociology
Dietrich Reuschmeyer, Chairman
M.A., Ph.D.

At the doctoral level, emphasis is placed on the fields of population, social organization (with emphasis on comparative studies of modernization), and urban studies and ecology. The Population Studies and Training Center facilitates and strengthens graduate training in demography, particularly in the fields of fertility, migration, and urbanization patterns.

Admissions: Most difficult
Eng. language training: Program, course, counseling
No. foreign students: 400
MAB concentrations: 12

University of Rhode Island

Kingston, RI 02881

Department of Plant and Soil Sciences
Walter Lorraine, Chairman
M.S.

Plant Pathology-Entomology
Richard W. Traxler, Chairman
M.S., Ph.D.

Admissions: Very difficult
Eng. language training: Course, counseling
No. foreign students: 201
MAB concentrations: 9,11

SOUTH CAROLINA

Clemson University

Clemson, SC 29631

Agronomy

G.R. Craddock, Head

M. Agriculture, M.S., Ph.D.

Entomology and Wildlife Biology

S.B. Hayes, Head

M.A., M.S., Ph.D.

Economic entomology, forest entomology, insect pathology and ecology supplemented by Agricultural Experimentation Center.

Plant Pathology and Physiology

W.M. Epps, Head

M. Agriculture, M.S., Ph.D.

Forest pathology and parasitology.

Agricultural Engineering

W.K. Welch, Head

M. Engineering, M.S., Ph.D.

Forestry

R.M. Allen, Head

M. Forestry, M.S.

Recreation and Park Administration

H. Brantley, Head

M.R.P.A.

Administration, resource management, comprehensive planning, interpretation.

Admissions: Moderately difficult

Eng. language training: Course, counseling

No. foreign students: 168

MAB concentrations: 2,9,11,14

Furman University

Greenville, SC 29613

Cooperative Forestry program

Paul H. Anderson, Dean

A 3/2 cooperative program with Duke University.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 12
MAB concentrations: NA

University of South Carolina
Columbia, SC 29208

Department of Biology
Larry T. Wimar, Department Head
M.S., Ph.D.

Ecology, including plant science, marine science, limnology, and environmental measurements.

Department of Marine Science
John Mark Dean, Director
M.S., Ph.D.

Ecology, limnology, aquatic bacteriology, pesticide residue analysis, pollution control and treatment, ground water, and aqueous chemistry.

Environmental Public Health
Winona Vernburg, Dean
Master of Public Health, M.S. in Public Health

Environmental monitoring - monitoring of biological and abiotic parameters in aquatic, atmospheric, and terrestrial environments. Evaluation of environmental impact statements. Resource management and cost/benefit analysis.

Admissions: Moderately difficult
Eng. language training: Course
No. foreign students: 163
MAB concentrations: 5,9,14

SOUTH DAKOTA

South Dakota State University

Bookings, SD 57007

Department of Agricultural Engineering

D.L. Moe, Head

M.S. Agricultural Engineering (thesis and non-thesis options)

Bio-environmental engineering, hydrology, energy and environment.

Department of Entomology-Zoology

Robert Walstrom, Head

M.S.

Department of Plant Science

Charles R. Krueger, Head

M.S. Agronomy, Plant Pathology

Department of Rural Sociology

James L. Satterlee, Head

Social organization, stratification, change and demography.

Department of Wildlife and Fisheries Science

Charles G. Scalet, Head

M.S.

Limnology, upland game management, aquatic ecology.

Admissions: Moderately difficult

Eng. language training: Course, counseling

No. foreign students: 90

MAB concentrations: 3,5,9,12,14

TENNESSEE

Carson-Newman College

Jefferson City, TN 37760

Cooperative Forestry program

Edward Freek, Jr., Contact

A 3/2 program with Duke University.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 6

MAB concentrations: NA

Lincoln Memorial University
Harrogate, TN 37752

Division of
Science

Dallas E. Wilhelm, Jr., Chairperson
Wildlife and fish management, in conjunction with Tennessee Valley Authority. Freshwater fish, park management.

Admissions: Noncompetitive
Eng. language training: None
No. foreign students: 14
MAB concentrations: 5

Middle Tennessee State University
Murfreesboro, TN 37132

Preforestry program in cooperation with the University of Tennessee; forest resources management, wildlife and fisheries sciences. Environmental science and technology program: interdisciplinary, with pollution control, air and water quality monitoring, noise reduction, waste recycling areas.

Admissions: Moderately difficult
Eng. language training: Course
No. foreign students: 180
MAB concentrations: 11,14

Tennessee Technological University
Cookeville, TN 38501

College of Arts and Sciences: Biology
Richard H. Fraser
M.S.

Strong emphasis on freshwater aquatic biology in conjunction with aquatic and wildlife research station.

Department of Plant and Soil Science
Agricultural Natural Resources and Management
Paul Eberhardt, Advisor
Natural and social sciences background related to natural
resources problems.

Department of Biology
William Willard, Chairman
B.S. Wildlife Management
Freshwater ecosystem emphasis.

Admissions: Less difficult
Eng. language training: Course, Program, Counseling
No. foreign students: 221
MAB concentrations: 5

University of the South
Sewanee, TN 37375

Cooperative Forestry Program
Albert Gooch, Jr., Director of Admissions
B.A., B.S.
A 3-2 cooperative program with Duke University.

Admissions: Very difficult
Eng. Language training: None
No. foreign students: 1
MAB concentrations: NA

University of Tennessee
Knoxville, TN 37916

Forestry and Wildlife and Fisheries Science
J.W. Barrett, W.L. Grecco
B.S., M.S.
Forest resource management, recreation, wildlife, and
fisheries; cooperates with Tennessee Valley Authority
and the national forests.

Plant and Soil Science
L.F. Seatz, Head
B.S. Agriculture, M.S., Ph.D.
Weed control technology and genetics.

Water Resources Development
M.S.

Graduate Program in Ecology
J. Frank McCormick, Director
M.S., Ph.D.

Interdisciplinary program based on several departments' resources: agricultural biology, forestry, plant and soil science, botany, zoology. Field and laboratory advisors and facilities.

Admissions: Moderately difficult
Eng. language training: Course, counseling
No. foreign students: 712
MAB concentrations: 2,5,9,11

Vanderbilt University
Nashville, TN 37240

Department of Biology
Burton J. Bogitsch, Chairman
M.A., M.S., Ph.D.

Primary research interests of the department are in plant and animal physiology and ecology-evolution. Laboratory or field emphasis is possible. Topics also under investigation are dendrology, entomology, limnology, and ecological genetics.

Admissions: Very difficult
Eng. language training: None
No. of foreign students: 174
MAB concentrations: 2,5,9,11,14

Texas

Abilene Christian University
Abilene, TX 79601

Department of Biology
Clark Stevens, Head
M.S. Wildlife Biology

Vertebrate anatomy, entomology, soil science, range management, ecology, limnology, agrostology, parasitology.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 33
MAB concentrations: 3,5,9

Angelo State University

San Angelo, TX 76901

Department of Biology
Chester M. Rowell, Department Head
M.S.

Field oriented. Environmental biology, animal and plant taxonomy, zoogeography stressed in faculty research. Other areas of study are desert plants, terrestrial ecology, and limnology.

Department of Agriculture
G. Leon Holland, Department Head
M.S. Animal Science
Range and wildlife management.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 16
MAB concentrations: 3,4,5

Baylor University

Waco, TX 76706

Institute of Environmental Studies
W. Merle Alexander, Director
B.A., B.S., M.S.

Interdepartmental program with advisory committee.

Cooperative Forestry Program
A 3-2 cooperative program with Duke University.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 46
MAB concentrations: NA

Rice University
Houston, TX 77001

Department of Environmental Science and Engineering
C.H. Ward, Chairman
B.A., B.S., M. Environmental Science, M. Environmental Engineering, M.S., Ph.D.

B.S. degree offered only as a double major with other engineering departments. Sample coursework: environmental law and measurements, atmospheric science, toxicology, water quality, resource management; graduate program emphasis is on water resources, water chemistry, and engineering.

Admissions: Most difficult
Eng. language training: None
No. of foreign students: 200
MAB concentrations: 5,11,14

Sam Houston State University
Huntsville, TX 77340

Department of Life Science
Maynard E. Yoes, Chairperson
B.S.

Five environmental science programs, including legal aspects of pollution control, instrumentation, water supply and waste disposal, air pollution, with traditional science core curriculum and multidisciplinary electives.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 226
MAB concentrations: 11

Stephen F. Austin State University
Nacogdoches, TX 75961

School of Forestry
Kent T. Adair, Dean
B.S., M.S., Ph.D.

Forest management, wood technology, forest fires, municipal forest management, forest engineering, game management, recreation management, range management.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 70
MAB concentrations: 2, 3

Sul Ross State University
Alpine, TX 79830

Division of Range Animal Science
Ernest L. Harman, Chairman
B.S.

Range or wildlife management: conservation, integration of wildlife population and land use objectives. Also a 3-2 cooperative forestry program with Duke University.

Admissions: Less difficult
Eng. language training: None
No. foreign students: NA
MAB concentrations: 3

Tarleton State University
Stephenville, TX 76402

School of Agriculture and Business
Jesse Tackett, Dean
B.S., Agriculture

Plant and soil science, grassland management, entomology, agriculture engineering, agronomy.

Admissions: Less difficult
Eng. language training: None
No. foreign students: NA
MAB concentrations: 3, 9

Texas A and M University
College Station, TX 77843

Department of Agricultural Engineering

E.A. Hiler, Head

M.S., M. Engineering, D. Engineering, Ph.D.

Soil and water topics; environmental and agricultural waste management; pollution abatement, forest engineering.

Department of Entomology

J.K. Olson, Acting Head

M.S., Ph.D.

Specialization in taxonomy, parasitology, toxicology, ecology, economics, forests, urban entomology.

Department of Forest Science

W.K. Murphey, Head

M. Agriculture, M.S., Ph.D.

Multidisciplinary program: natural resources development, ecology, entomology, genetics, mensuration, pathology, silviculture, soils, wood chemistry. Research programs.

Department of Plant Sciences

H.E. Joham, Head

M.S., Ph.D.

Genetics, plant breeding, pathology, physiology; forest and fungal genetics are specializations. Pathology option, physiology option.

Department of Range Science

J.L. Schuster, Head

M. Agriculture, M.S., Ph.D.

Non-research degree (M. Agriculture); rangeland areas available for field studies of biosystematics, ecology, mineral cycling, plant nutrition, range animals, watershed management, weed and woody plant control.

Department of Soil and Crop Science

M.E. Bloodworth, Head

M. Agriculture, M.S., Ph.D.

Agronomy, food science and technology, genetics, plant breeding, soils, chemical fertility, soil genesis, classification, microbiology, soil-water-plant relationships.

Department of Wildlife and Fisheries Science

James Garth, J.G. Teer

M. Agriculture, M.S., Ph.D.

Ecology systematics, vertebrate behavior, wildlife and fisheries management, aquaculture, limnology, use of state environmental research stations.

Admissions: Moderately difficult

Eng. language training: Program

No. foreign students: 988

MAB concentrations: 2,3,5,6,9,11

Texas Tech University

Lubbock, TX 79409

Department of Entomology

Darryl P. Sanders, Chairperson

M.S., M. Agriculture

Specialization in agricultural, environmental, and systematic uses of entomology.

International Center for Arid and Semi-Arid Land Studies

Acts as a medium of stimulation, coordination, and implementation of symposia and information exchange. Attention is given to all aspects of dry environments.

Department of Park Administration and Landscape Architecture

Ernest B. Fish, Chairperson

M.S.

Department of Plant and Soil Science

Dwane G. Miller, Chairperson

M.S., Ph.D.

Arid lands, crops, fertilizers and genetics.

Department of Range and Wildlife Management

Donald F. Burzlaff, Chairperson

M.S., Ph.D.

Special studies in the physiological basis of grazing management.

Admissions: Noncompetitive

Eng. language training: None

No. foreign students: 613

MAB concentrations: 3,4, 9

University of Texas, Austin
Austin, TX 78712

Department of Biological Sciences
M.A., Ph.D.

Ecology in many areas of specialization are available.

Department of Geography
M.A., Ph.D.

Analysis of mutual impact of humans and environments with respect to spatial patterns, regional distinction, and patterns of adaptation. Research centers, including the Water Resources Research Center, Center for Energy Studies and the Population Research Center, supplement the program.

Admissions: Moderately difficult
Eng. language training: Program, course, counseling
No. foreign students: 1843
MAB concentrations: 11, 12

University of Texas, San Antonio
San Antonio, TX 78285

Division of Environmental Studies
M.S., Environmental Management

Natural resources: economics, water, land, and energy resources management, air quality.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: NA
MAB concentrations: 5, 11

UTAH

Brigham Young University
Provo, UT 84601

Department of Agronomy and Horticulture
Laren R. Robison, Chairman
B.S., M.S.

Crop production, ecology, physiology and improvement;
fertility, irrigation, management and conservation of
soil.

Department of Botany and Range Science
Bruce Nephie Smith, Chairman
B.S., M.S., Ph.D.

Undergraduate curricula is preprofessional, aimed at
botany teacher careers. Option of specializing in range
research or wildland recreation.

Admissions: Moderately difficult
Eng. language training: Course, program
No. foreign students: 1225
MAB concentrations: 3, 9

Utah State University
Logan, UT 84322

Department of Plant Science
Keith R. Allred, Head
M.S., Ph.D., Plant Science, Plant Ecology

Department of Soil Science and Biometeorology
R. John Hanks, Head
M.S., Ph.D. Soil Science and Biometeorology, Physical Ecology

Interdepartmental Ecology Curriculum
John M. Neuhold, Director
M.S., Ph.D. Ecology; "residence" in a traditional graduate
program
Specializes in mountain and desert regions of the western
U.S.

Department of Biology
M.S., Ph.D.
Gene W. Miller, Head
Ecology, aquatic microbiology, toxicology, plant pathology.

Department of Wildlife Science
John A. Kadlec, Head
M.S., Ph.D. Wildlife Science, Wildlife Ecology

Typical program supplemented by research in fisheries, river studies, and behavior ecology.

Department of Forestry and Outdoor Recreation
Lawrence S. Davis, Head
M. Forestry, M.S., Ph.D.

Department of Geology
Clyde T. Hardy, Head
M.S. Geology, Ecology
Environmental resources, ground water, and surficial geology.

Department of Range Science
Don D. Dwyer, Head
M.S., Ph.D. Range Science, Range Ecology, Watershed Science
Water oriented aspects of natural resource management with emphasis on wildland resource management, precipitation patterns, overland flow, and water use by plants.

Interdepartmental Curriculum in Toxicology
Joseph C. Street, Chairman
M.S., Ph.D.
Effects of toxics on organisms and ecosystems. Insecticide toxicology, agricultural sprays and dust, biochemical basis of herbicidal action.

Admissions: Moderately difficult
Eng. language training: Program, course
No. foreign students: 776
MAB concentrations: 2,3,4,5,6,9,11

VERMONT

Goddard College
Plainfield, VT 05667

Non-traditional academic program substituting periodic reviews for grades and courses. The natural sciences are approached from an environmental perspective. The Institute for Social Ecology analyzes programs for food and energy self-sufficiency.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 19
MAB concentrations: NA

St. Michael's College

Winooski, VT 05404

Environmental Science Program

Jerry E. Flanagan, Director

Interdisciplinary program with components including chemistry, biology, mathematics, political science, sociology, and physics.

Admissions: Moderately difficult

Eng. language training: Program, course, counseling

No. foreign students: 224

MAB concentrations: NA

University of Vermont

Burlington, VT 05401

Natural Resource Planning

Hugo John, Acting Chairman

M.S.

Interdisciplinary program on planning, land use, and development, as well as coordination of services, facilities, and land uses. Sample courses: agriculture, rural communities, urban planning, natural resources.

Environmental Studies Program: Agriculture, Engineering, Natural Resources

Carl Reidel, Director

B.A., B.S.

Concentration in a traditional discipline.

School of Natural Resources

B.S.

Forestry, forestry management, resource economics, wildlife biology.

Botany

Hubert W. Vogelmann, Chairman

M.S., Ph.D.

Ongoing ecology program (includes plant communities, biogeography, limnology, physiology, brycology, and pteridology).

Forestry

Hugo John, Acting Chairman

M.S.

Integrated approach to forest land resource problems. Management, policy, research options.

Plant and Soil Science

Samuel C. Wiggans, Chairman

M.S., Ph.D.

Environmental physiology, soil chemistry and plant nutrition. Areas of research include: chemical and environmental control of plant growth, cultural and environmental interrelationships that affect plant growth, agricultural waste management.

Admissions: Very difficult

Eng. language training: Course, counseling

No. foreign students: 54

MAB concentrations: 2, 5

VIRGINIA

Bridgewater College

Bridgewater, VA 22812

Cooperative Forestry Program

Michael L. Hill, Department of Biology

B.S.

A 3-2 year cooperative program with Duke University.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 10
MAB concentrations: NA

George Mason University

4400 University Drive
Fairfax, VA 22030

Department of Biology
Averett S. Tombes, Chairman
M.S.

Students may specialize in environmental (pollution assessment and management) biology, or systemic, evolutionary and population biology. Freshwater, tropical, and animal ecology are investigated in the latter category.

Admissions: Moderately difficult
Eng. language programs: None
No. foreign students: 56
MAB concentrations: 1,5,14

Old Dominion University

Norfolk, VA 23508

Department of Biology
Heinz K. Meier, Dean, School of Arts and Letters
M.S.

Biomedical or ecological concentrations.

Admissions: Moderately difficult
Eng. language programs: None
No. foreign students: 175
MAB concentrations: 11

University of Virginia
Charlottesville, VA 22903

Department of Environmental Sciences
H. Grant Goodell, Chairman
M.A., M.S., Ph.D.

Strongly integrated interdisciplinary approach. Specialization in ecology (aquatic, terrestrial, freshwater, estuary, biogeography); fluid systems (thermodynamics, stream flow, hydrology, influence of man on water flow systems); geodynamics (soil, sediments, aquatic chemistry, coastal hydrodynamics); resources affairs (land use, population, urban development).

Admissions: Very difficult
Eng. language training: Course, counseling
No. foreign students: 177
MAB concentrations: 5,10,11,12

Virginia Polytechnic Institute and State University
Blacksburg, VA 24060

Department of Agricultural Engineering
J.P. Mason, Head
M.S., M. Engineering (non-thesis), Ph.D.

Soil and water conservation, agricultural hydrology, soil-water-plant relations, renewable resources, environmental control.

Department of Agronomy
T.B. Hutcheson, Jr., Head
M.S., Ph.D.

Environmental resource development and control, crop physiology and ecology, genetics, soil microbiology, fertility.

Interdisciplinary program: Environmental Sciences and Engineering
Paul King, Chairman
M.S., Ph.D.

Engineering solutions to water pollution, solid waste management, air pollution, noise pollution, hazardous material disposal and soil pollution.

Division of Forestry and Wildlife Resources

J.F. Hosner, Director

M.F., M.S., Ph.D.

Research degrees offered in cooperation with a forestry research unit of Virginia. Silviculture and soils, ecology, management, economics, wood science, wildlife, recreation. Fisheries and wildlife, forestry and forest products.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 401

MAB concentrations: 2,5, 9, 11,14

WASHINGTON

Central Washington State University

Ellensburg, WA 98926

Department of Biological Sciences

Robert H. Brown, Chairman

M.S.

Entomology, aquatic biology, limnology, plant science.

Admissions: Moderately difficult

Eng. language programs: None

No. foreign students: 30

MAB concentrations: 5, 9

Evergreen State College

Olympia, WA 98505

Program allows differing degrees of individualization and specialization. Evaluations are substituted for the more typical credits and courses. Relevant topics include: Environmental Studies (ecosystems, alternative agriculture, and environmental design), and Marine Sciences (particular emphasis is placed on studies of Puget

Sound and Northwest waters; Aquaculture, shellfish, seacoast management and fisheries).

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 7
MAB concentrations: 5

University of Washington
Seattle, WA 98195

Fisheries

Douglas Chapman, Dean
M.S., Ph.D.

Population dynamics, fish ecology, management of freshwater fisheries, aquaculture, fish genetics, biological impact studies and water quality.

Forest Resources

James S. Bethel, Dean
M.S., M.F.R., Ph.D.

Biology, science of forestry (soils, tree nutrition, ecology, physiology, entomology, pathology, and silviculture). Mensuration, biometry operations, hydrology, road engineering, moisture relations, weed chemistry and physics, forest management--watershed, recreational use, economics of forest land management, cost analysis.

Admissions: Very difficult
Eng. language training: Course, program, counseling
No. foreign students: 1405
MAB concentrations: 1,2,5,11

Washington State University
Pullman, WA 99163

Environmental Studies Program

Tom. J. Bartuska, Chairman
M.S.

Some technical education in the sciences is a prerequisite. Traditional sciences (chemistry, physiology, mathematics, computer sciences) with specialization in agricultural

ecology, environmental health, natural resources, biology, cultural ecology, or physical sciences.

Agricultural Engineering

M.S., Ph.D.

Interdepartmental program in engineering sciences: soil, water, farm structures, environmental aspects.

Agronomy

J.C. Engibous, Chairman

Ph.D.

Graduate areas: plant physiology and experimental morphology, plant breeding and genetics, crop production and ecology.

Wildlife Biology

John H. Larsen, Chairman

M.S., Ph.D.

Fishery ecology, parasitology, nutrition, population ecology, upland game ecology.

Entomology

Robert F. Harwood, Chairman

M.S., Ph.D.

Taxonomy, behavior, ecology, economic entomology, pest management, forest entomology. Cooperative research labs with U.S. government.

Environmental Science

H.H. Cheng, Chairman

Interdisciplinary program: natural and modified environments, interactions with human communities. Agricultural ecology, natural resources, environmental quality control, regional land use planning are some options.

Forest and Range Management

Grant A. Harris, Chairman

M.S.

Thesis and non-thesis options. Forest management, forest economics, entomology, pathology, forestation, wildlife recreation, silviculture, watershed management, range management, ecology, range rehabilitation, multiple-use land management and conservation.

Plant Pathology

John F. Schafer, Chairman

M.S. Plant Pathology, Ph.D.

Formal courses in pathology and supporting areas (thesis and final oral examination). Preparation for research or commercial public health service.

Soils

J.C. Engibous, Chairman

M.S., Ph.D.

Soil systems: chemical and biochemical interactions, energy exchange, plant growth. Research: biosphere energy exchange, role of soils in watershed management, land use, fertility for forest species, water quality, environmental pollution.

Admissions: Moderately difficult

Eng. language training: Course, program

No. foreign students: 450

MAB concentrations: 2,3,5,9,11,14

Western Washington State College

Bellingham, WA 98225

Huxley College of Environmental Sciences

M.S. (cooperative degree with Department of Biology or Geography and Regional Planning)

Emphasis on land-use planning--regional, urban, and site.

Admissions: Moderately difficult

Eng. language training: None

No. foreign students: 43

MAB concentrations: NA

WEST VIRGINIA

Marshall University

Huntington, WV 25705

Cooperative Forestry Program

B.S.

A 3-2 program with Duke University.

Admissions: Less difficult
Eng. language training: None
No. foreign students: 130
MAB concentrations: NA

West Virginia University

Morgantown, WV 26502

College of Agriculture and Forestry, Division of Forestry
Wallace W. Christensen, Chairman
B.S.F., B.S.

Forest resource management and industries. Biology,
ecology, administration. Recreation and parks program.
Preparation for professions as fish biologist, wildlife
manager; wildlife conservationist option.

College of Agriculture and Forestry, Division of Plant
Sciences

Mannon E. Galleghy, Jr., Chairman

B.S., M.S., Ph.D.

Agronomy, soil science, fertilizer use, environmental
protection, horticulture, basic sciences programs.
Forest resource science, forestry, wildlife management
degrees.

Admissions: Less difficult
Eng. language training: Course, counseling
No. foreign students: 625
MAB concentrations: 2,9,11

West Virginia Wesleyan College

Buckhannon, WV 26201

Cooperative Forestry program

Wenrich Green, Director

B.S.

A 3-2 cooperative program with Duke University.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 20
MAB concentrations: NA

WISCONSIN

Beloit College

Beloit, WI 53511

Cooperative Forestry program
R.D. Newsome, Advisor
A 3-2 forestry program with Duke University.

Admissions: Very difficult
Eng. language training: None
No. foreign students: 13
MAB concentrations: NA

Carthage College

Kenosha, WI 53140

Conservation
Larry Behm, Director Admissions
B.S.
Interdisciplinary (chemistry, biology, physics) forest
and plant morphology, microbiology, meteorology, clima-
tology, hydrology, and landform geography.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 6
MAB concentrations: NA

Mount Senario College

Ladysmith, WI 54848

Cooperative Forestry program
B.A., B.S.
Cooperative program with Michigan Technological University.

Recreation, land management, wildlife ecology, freshwater ecology, urban forestry, soils science, conservation.

Admissions: Moderately difficult
Eng. language training: Course
No. foreign students: 7
MAB concentrations: NA

Northland College
Ashland, WI 54806

Environmental Studies
Richard Verch, Chairperson
B.S.

Biochemistry, economics, biology, chemistry, environmental emphasis possible in biology, chemistry, environmental business, environmental economics, land use, sociology, physics.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 13
MAB concentrations: NA

University of Wisconsin, Green Bay
Green Bay, WI 54302

Regional Analysis
Donald Gandre, Chairperson
B.A., B.S.

Land use analysis and planning, recreation planning, Great Lakes geography.

Urban Analysis
Per Kristian Johnsen, Chairperson
B.A., B.S.

Individual and cultural effects of urbanization; management strategies.

College of Human Biology
Elain McIntosh, Chairperson
B.A., B.S.

Human adaptability, health, science orientation to program
Environmental stress.

College of Environmental Sciences

Robert B. Wenger, Chairperson

B.A., B.S.

Population dynamics; overpopulation, resource distribution
stresses; comparison to other biological models.

Environmental Administration

Arthur Atkisson, Chairperson

B.A., B.S., MEAS

Impact of scientific, management principles and theory
on environment.

Environmental Management

Hallet Harris, Jr., Coordinator

B.A., B.S.

Human activities' impact on natural and built environments.
Environmental monitoring and analysis techniques.

Environmental Stressors

Dennis Gerard

Study of agents having a deleterious effect on behavioral,
developmental, or physiological responses of exposed
organisms.

Global Ecology

Paul Sager, Coordinator

B.A., B.S., MEAS

Ecosystem productivity, community health, environmental
quality, examined from a global perspective.

Admissions: Moderately difficult

Eng. language training: Course, counseling

No. foreign students: 76

MAB concentrations: 5,11,12,14

University of Wisconsin, Madison

Madison, WI 53706

A number of centers for specialized research and academic
departments coordinate with a traditional sciences core

and interdisciplinary programs. Strengths: water resource management, marine sciences, resources development and policy, recreation and park management.

Agronomy

Johnny Wryas Pendleton, Chairman

M.S., Ph.D.

Crop production and wood science; ecology.

Entomology

George Bousch, Chairman

M.S., Ph.D.

Ecology, behavior, economic entomology, toxicology, symbiotics, biological control, are among research topics.

Environmental Monitoring

Professor Kiefer, Chairman

M.S., Ph.D.

Interdisciplinary program: technologies and techniques (e.g., satellite, remote sensing).

Forestry

Lawrence Geise, Chairman

M.S., Ph.D.

Ecology, economics, management, genetics, soils, silviculture, entomology of forests, pathology.

Oceanography and Limnology

Professor Meyer, Chairman

M.S., Ph.D.

Plant Pathology

John Mitchell, Chairman

M.S., Ph.D.

Soil Science

Leo Walsh, Chairman

M.S., Ph.D.

Specialty in forest soils.

Water Chemistry

Gordon Chester, Chairman

M.S., Ph.D.

Chemical limnology, water and wastewater treatment.

Water Resource Management
Professor Hart, Chairman
M.S.

Wildlife Ecology
Robert McCabe, Chairman
M.S., Ph.D.

Land Resources
Gerhart Lee, Chairman
M.S., Ph.D.

Interdisciplinary program oriented on combined management studies with physical or biological sciences. Examples: land use planning, soil and water conservation, land problems in developing countries, and resource information.

Admissions: Moderately difficult
Eng. language training: Program
No. foreign students: 2267
MAB concentrations: 2,5,9,11,14

University of Wisconsin, Platteville
Platteville, WI 53818

Agricultural Engineering
Milton Shute, Chairman
B.S.

Soil conservation and management, biological control, structures and the environment.

Department of Agricultural Sciences
William Hoffman, Chairman
B.S.

Soil and crop sciences: crop, weed and disease identification, soil fertility, genetics, meteorology, chemistry.

Admissions: Moderately difficult
Eng. language training: None
No. foreign students: 50
MAB concentrations: 9, 10

University of Wisconsin, River Falls

Plant and Earth Science
Samuel Huffman, Chairman
B.S.

Plant science, soil science, resource management, conservation degrees.

Admissions: Less difficult
Eng. language training: None
No. foreign students: NA
MAB concentrations: NA

WYOMING

University of Wyoming

Laramie, WY 82071

Plant Sciences Division, College of Agriculture
Leroy Painter, Head

B.S. Crop Science, M.S., Ph.D. Agronomy.

Agriculture and forestry technologies, soil science, range management, entomology, plant pathology and physiology; ecology-related sciences.

Recreation and Park Administration, College of Arts and Sciences

Donald Warder, Department Head

B.S., M.S.

Natural science, public administration, anthropology, sociology areas to be concentrated in.

Admissions: Moderately difficult
Eng. language training: Course
No. foreign students: 424
MAB concentrations: 2,3,6,9

U.S. GOVERNMENT TRAINING COURSES

The United States government conducts training primarily through four agencies: the U.S. Department of Agriculture, the U.S. Department of Interior, the U.S. Environmental Protection Agency, and the U.S. Department of Commerce. Some of these are specifically for foreign nationals; others are short courses primarily intended for U.S. technicians, but suitable in many cases for advanced foreign nationals with proficiency in English.

U.S. Department of Agriculture

Office of International Training and Development
Room 3529--South Building
Washington, DC 20250

In cooperation with the Agency for International Development and a number of U.S. universities, the Department of Agriculture has presented short courses in agriculture and rural development. Many of these have a strong environmental component.

Participants are administrators, scientists, trainers and technicians in agriculture, home economics and rural development from other nations.

USDA publishes a course catalog which can be obtained from the Office of International Training and Development as the above address. No specific universities are listed in the catalog, but program content, language of instruction, dates and the target audience are specified. Sample short courses include: agricultural research methodology; irrigation problems and practices; integrated pest management; development and management of water resources; and range management and forest production. Many of the courses emphasize practical field training and utilize local community resources.

United States Department of Commerce

National Oceanic and Atmospheric Administration (NOAA)
The Sea Grant Program
Washington, DC 20230

There are twenty-seven university-based programs, funded through NOAA. All programs share information and research, creating a marine research network. Research, advisory services and education are components of each program.

Full-time course work is typically available in ocean engineering, interdisciplinary systems, and continuing education. Many have summer programs for professional engineers and scientists from industry, government, and universities. Short, intensive classes on scientific, technical, and management topics are conducted during July and August.

Recent course content at the Massachusetts Institute of Technology, for instance, included: transportation systems management and analysis, port planning and development, design and construction of off-shore facilities.

For more information, contact NOAA at the above address.

U.S. Department of the Interior, National Park Service
in conjunction with the University of Michigan and Parks
Canada, Department of Indian and Northern Affairs
Tom D. Thomas, Director, School of Natural Resources
University of Michigan, Ann Arbor, MI 48109

National Parks and Equivalent Reserves Seminar Program

This seminar is designed for senior administrators, professional personnel and conservation leaders responsible for the establishment and development of park and wildlife conservation systems and associated tourist programs throughout the world.

This is a "travelling seminar" which moves from study site to study site by bus and aircraft. It is offered in the English language only. The 1979 seminar included stops at the Jasper National Park, Langley National Park, Vancouver, Olympic National Park and the Hawaii Volcanoes National Park. Duration of the seminar is one month.

The purpose of this seminar is to examine policies, administration, planning and other aspects of management of national parks and equivalent reserves. It is a professional and technical academic course.

United States Environmental Protection Agency

401 M. Street, S.W.

Washington, DC 20460

EPA sponsors a great variety of seminars, workshops and self-instructional courses. Many of these are relatively technical in nature, and some of them are designed for certification in operational air and water pollution control technologies.

Air pollution training is coordinated through the Air Pollution Training Institute, MD 20, Environmental Research Center, Research Triangle Park, North Carolina 27709. (907) 541-2497. Training programs include the broad areas of administration and management, visible emissions observations, air pollution meteorology, microscopy and the like. Many require at least one year of college calculus, statistics or some technical experience.

Water quality control training courses are coordinated through the National Training and Operational Technology Center, Cincinnati, Ohio 45268. The EPA Regional Laboratory, Athens, Georgia, also actively participates in training efforts directed toward the attainment of self-sufficiency at the state and local level. Short courses (four to five days) are offered in both places in the general areas of wastewater treatment, technology, evaluation and inspection, and in water quality control, surveillance, monitoring and analysis.

Course catalogs, schedules, and applications are available from the institutions noted above. Many courses take place at other regional centers or at cooperating universities.

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PRIVATE ASSOCIATIONS

WORKSHOPS, CONFERENCES AND MEETINGS

OF ASSOCIATIONS, SOCIETIES, AND COUNCILS

Most of the workshops, seminars, and convocations described in this section are designed to help professionals stay abreast of developments in their fields. The programs are listed alphabetically rather than geographically because most are held under the auspices of national organizations. Virtually all of them require proficiency in English. Many are open to non-members and encourage international exchange of information. Further information is available from the groups themselves.

American Chemical Society

1155 16th Street, N.W.
Washington, DC 20036
(202) 872-4600

Environmental Chemistry Division

Attention: Linda Deans
(412) 343-9200, ext. 319

Two six day workshop-oriented conferences are held annually, with the basic areas of discussion being atmospheric inputs to pollution of natural waters, photochemical smog, advanced thermal processes for the conversion of solid wastes and residuals, and toxic substance control. The conferences are open to non-members.

American Farm Bureau Foundation

225 Touhy Ave.
Park, IL 60068
(312) 399-5700

Attention: Don Rowllins

Offers workshops on agricultural chemistry, water quality, water resources policy, land use, and energy. The January 1980 conference will focus on agricultural perspectives of energy use and development. Notification by non-members is required prior to attendance.

American Fisheries Society

5410 Grosvenor Lane

Bethesda, MD 20014

(301) 399-5700

Attention: Ms. Allen

Sponsors various symposia and technical conferences.

Topics in 1980 include agriculture and warm water.

Open to non-members upon notification.

American Forage and Grasslands Council

121 Dantzler Court

Lexington, KY 40503

(606) 278-3609

Attention: Liz Thompson

Infrequent conferences (next date: June 1981) often specifically address subjects relevant to developing nations. Grassland agriculture in tropical regions is the next conference topic. International participation is encouraged.

American Forestry Association

919 17th Street, N.W.

Washington, DC 20006

(202) 467-5810

Attention: Richard Pardo

Annual four day fall meeting reviews problems in forestry conservation. Open to non-members.

American Health Foundation

1370 Avenue of the Americas

New York, NY 10019

(212) 953-1900

(914) 592-2600, research center in Westchester, N.Y.

Only graduate and medical students are accepted in research programs. Included are the areas of environmental toxicology, cellular biology, and cancer. Financial assistance is not available due to limited funds.

American Institute of Chemical Engineers

United Engineering Center

345 47th Street

New York, NY 10017

Seminars are offered as an annual education program.

Contact the A.I.C.E. in the spring for a list of topics.

American Institute of Landscape Architects

6810 North Second Place

Phoenix, AZ 85012

(602) 277-0096

Attention: Gail Gridley

Two conferences each year (February and July) which discuss urban planning from environmental and international perspectives.

American Institute of Physics

335 E. 45th Street

New York, NY 10017

(212) 661-9404

Annual conference is held in March. Environmental issues such as nuclear reactor safety and air, water, and noise pollution are periodically addressed in conference seminars.

American Meteorological Society

45 Beacon Street

Boston, MA 02108

(617) 227-2425

Attention: Evelyn Mazer

Fifteen short, intensive meetings are held each year; topics vary. The annual conference is devoted to only one topic, in 1979 it was climate and energy.

American Nuclear Society

555 N. Kensington Ave.

La Grange Park, IL 60525

(312) 352-6611

Attention: David G. Pettengill, ANS Meetings Manager

Two annual conferences are sponsored, one in June, one in November. Numerous conferences, workshops, and

seminars--more specific in subject matter--are sponsored throughout the year. All discussions are highly technical; a strong nuclear science background is therefore recommended. The April 1980 meeting concerns nuclear material use in environmental and energy research. Environmental safety is the topic for June 1980.

American Phytopathological Society

1955 University Ave.

St. Paul, MN 55104

(612) 454-7250

Conference is held annually in August on aspects of plant protection. Habitat modification, socioeconomic and cultural aspects of plant protection, and pest control are major topic areas. Open to non-members.

American Society of Agricultural Engineers

2950 Miles Road

Saint Joseph, MI 49085

(616) 429-0300

Two or three major conferences are held annually. Topics have included biological insect control, hydrology, non-point source pollutants, aquaculture, watershed management, and international erosion control problems. Scheduled meetings are: general meeting (December 1979), livestock waste disposal (April 1980), energy (September 1980), and forest engineering (March 1981).

American Society of Agronomy

677 South Segue Road

Madison, WI 53711

(608) 274-1212

Attention: Mr. Krawl

Annual fall conference usually addresses specific environmental issues. For agenda, contact the Society six to nine months in advance.

American Society of Civil Engineers

345 East 47th Street

New York, NY 10017

Two conferences are held annually, in April and October. Sample sessions for the fall of 1979 include: impact analysis, regional water resource management, remote sensing, and energy conservation. Periodic technical conferences are held throughout the year; e.g., joint power generation, urban transportation topics.

American Society for Microbiology

1913 I Street, N.W.
Washington, DC 20006

Various seminars and conferences, usually three days in length. Only occasionally are environmental topics offered.

American Society of Planning Officials

1313 East 60th Street
Chicago, IL 60637
(312) 947-2096

Conferences for urban planners of the state, metropolitan, and levels. Technical and mobile (field) workshops investigate subjects which include: resource recovery and landfill, strip mining, solid, toxic and radioactive wastes, regional air quality, and energy in the city. Consult six months in advance for schedules.

American Society of Plant Pathologists

9650 Rockville Pike
Bethesda, MD 20014
(301) 530-9474

The Society sponsors only one event, its annual meeting, held in the summer. Topics are highly technical and only occasionally consider environmental issues.

American Society of Range Management

2760 West 5th Avenue
Denver, CO 80204
(303) 571-0174

February annual convention and occasional symposia. Problems of developing nations are stressed. Non-members welcome, subjects are varied in specificity.

American Society of Sanitary Engineers

228 Standard Building
Cleveland, OH 44103
(216) 696-3228

At the annual fall conference, a two day refresher course in solar energy, waste disposal and water conservation is offered. Open to non-members.

American Society of Traffic and Transportation, Inc.

547 West Jackson Blvd.
Chicago, IL 60606
(312) 939-2491

August annual meeting sometimes examines environmental issues related to traffic and transportation management.

Engineering Foundation

United Engineering Center
345 East 47th Street
New York, NY 10017
(212) 644-7835

Conferences are sponsored throughout the year, an average of four deal with environmental issues. Upcoming discussions include geotechnical and environmental aspects of geopressure energy, food processing and environmental management.

Forest Products Research Society

2801 Marshall Court
Madison, WI 53705
(608) 231-1361

Two or three large conferences each year. Wood energy topics are scheduled for discussion at the next conference. The Society acts as a link between the forest products industry and ongoing forest research.

The Geological Society of America

330 Penrose Place
Boulder, CO 80301
(303) 447-2020

Attention: Ms. Irene Woodall

Annual conference with smaller seminars every few months. Topics vary. Contact the Society for specific topics and dates.

Institute of Environmental Studies

940 East Northwest Highway
Mt. Prospect, IL 60056

A professional society working in industry with five areas of concern: ecology, technical, tests and evaluation, biosciences and contamination control, educational and training. An annual conference will focus next on environmental technology.

Inter-American Tropical Tuna Commission

8604 LaJolla Shore Drive
LaJolla, CA 92307

Founded by international agreement to study tuna fisheries management. Qualified graduate students are eligible to assist in research.

Lincoln Filene Center for Citizenship and Public Affairs

40 Tufts University
Medford, MA 02155
(617) 628-5000 ext. 352

Offers a week long annual conference geared toward New England environmental leaders.

Marine Technology Society

1730 M Street, N.W.
Washington, DC 20036
(202) 659-3251

Coordinate activities on coastal zone management, law of the sea, marine resources, and environmental protection. Professional panels meet periodically. The annual conference is held in the fall.

Population Council

1 Dag Hammarskjöld Plaza
New York, NY 10017
(212) 644-1300

Awards fellowship to candidates in post-doctoral biomedical or demographic studies.

Resources for the Future, Inc.

1755 Massachusetts Ave., N.W.
Washington, DC 20036
(202) 464-4400

Attention: Information Office

Highly technical occasional conferences and day long seminars. A competitive, salaried research program has been established for advanced students, including those of developing countries. Topics focus on agriculture and energy. Positions last from several months to as long as three years.

Society of American Foresters

5400 Grosvenor Lane
Washington, DC 20014
(301) 897-8720

Attention: Edward Robie

An annual conference with general and technical topics is held in October.

Thorne Ecological Foundation

2336 Pearl
Boulder, CO 80302
(303) 443-7325

Offers seminars on a wide range of issues with short planning stages--no definite schedule. Programs in land management, computers and knowledge transfers. Some field experience in land management is available. Designed for public administrators and academic faculty.

Water Pollution Control Federation

2626 Pennsylvania Ave., N.W.
Washington, DC 20037

Technical conference each fall discusses technological and scientific advancements as well as water pollution control programs in Latin America, North America, Europe, and Asia.

Western Dredging Association

1911 North Fort Myer Road

Arlington, VA 22209

(703) 524-6367

Attention: Mr. George Watts

Conferences are held (but not on an annual basis) for presentation of technical papers on environmental topics. Delegates from Taiwan, Japan, Europe, Africa, and Central America have attended past conferences.

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SPECIAL PROGRAMS

In addition to the special program at the East-West Center, described below, there are some other programs in the planning stage which will be devoted specifically to environmental management in developing countries. Well along in development is a program in which Clark University, in conjunction with the University of North Carolina and the Southeast Consortium for International Development (SECID), will operate a series of training activities in Africa (Cameroon, Ivory Coast, Malawi, Mali, Mauritania, Senegal, Sudan, Tanzania, Upper Volta and Zaire). Further details for programs at Clark, Yale and Cornell are available at the addresses listed in the University section.

East-West Environment and Policy Institute

The East-West Center
1777 East-West Road
Honolulu, HI 96848

The Institute (EIPI) has begun a program, "Building and Strengthening Capabilities for Natural Systems Management in the Asia-Pacific Region" for locally-adapted professional education and training that is aimed at improving environmental soundness of development projects.

The EAPI/BSC program has three goals: research to produce analytical approaches to key aspects of natural systems management; education to produce and prepare professional educational materials on the key aspects of natural systems management developed through multi-national research and adapt them to local situations; and networks to establish and support indigenous education and training programs and networks of formal and informal institutional arrangements.

Persons invited to participate in the workshops should be currently engaged in professional education or training for the preparation and use of environmental assessments or other aspects of natural systems management. Results of the fall 1979 workshop program are planned to extend from 1980-82 and will test and initiate training programs in participating countries. All materials, techniques

and curricula that are developed throughout the three years will be made available to those countries wishing to participate.

PROGRAM SEARCH GUIDE

PROGRAM SEARCH GUIDE - 1

Most Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Stanford University		X			X					X	X			X	Env., Civil	X	X		13
University of California, Berkeley		X	X		X	X			X		X		X	X	Sanitary	X	X	X	14
University of California, Davis				X	X	X	X		X					X	Res. Sciences				15
Wesleyan University																			25
Yale University	X	X			X						X					X	X	X	25
University of Chicago	X																		39
Bowdoin College																			54
Johns Hopkins University					X		X			X	X		X		Eng. Science, Env.		X		57
Harvard University	X	X								X	X		X		Env. Science	X	X		60
Massachusetts Institute of Technology										X			X		Eng. (options)		X		61
Williams College		X																	63
Dartmouth College	X				X	X				X					Env.				80

(1) Tropical Forests (2) Temperate Forests (3) Grazing Lands (4) Arid Zones (5) Fresh Water
(6) Mountains (7) Islands (8) Biosphere Reserves (9) Pesticides/fertilizer (10) Engineering works
(11) Urban ecosystems (12) Demographic change (13) Perception of environmental quality (14) Pollution
(A) Program (B) Course (C) Counseling (NA) Not in text

PROGRAM SEARCH GUIDE - 2

Most Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Columbia University											X				Civil and Chem.	X	X	X	NA
Cornell University	X	X			X				X	X	X		X		Ag. Waste Mgmt.	X	X	X	86
State University of New York, Syracuse		X	X		X				X	X					Env. and Res.				90
Duke University	X	X			X						X	X			Env.		X	X	92
University of North Carolina					X					X	X	X		X	Env., Pub. Health		X	X	95
Brown University												X				X	X	X	113
Rice University					X						X			X	Env. Science, Env.				121

(1) Tropical Forests (2) Temperate Forests (3) Grazing Lands (4) Arid Zones (5) Fresh Water
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PROGRAM SEARCH GUIDE - 3

Very Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Auburn University		X	X		X				X		X							Env.	1
Northern Arizona University		X	X		X				X										5
California State Polytechnic University, Pomona									X										8
California State University, Chico			X		X				X										8
California State University, Fullerton													X						9
California State University, Hayward																			10
California State University, Sacramento																		Civil	NA
University of California, Irvine											X	X						Civil, Env.	15
University of California, Riverside									X			X							16
University of California, Santa Barbara					X						X							Env.	17

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PROGRAM SEARCH GUIDE - 4

Very Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
University of California, Santa Cruz					X	X	X			X								17	
University of Redlands																X		18	
University of Denver						X				X		X		Env.	X	X	X	23	
University of Connecticut	X				X			X	X					Env.		X	X	24	
Rollins College																		30	
Georgia Institute of Technology										X				Sanitary	X		X	NA	
Illinois Institute of Technology										X		X		Env.		X	X	NA	
Knox College	X	X	X		X											X		38	
Northwestern University	X								X	X		X		Env. Health, Env.				38	
University of Illinois, Urbana - Champaign		X						X	X	X		X		Env.	X			40	
Notre Dame					X			X	X					Civil		X		43	
Purdue University		X			X			X	X					Env.		X	X	44	
Coe College																X		45	

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PROGRAM SEARCH GUIDE - 5

Very Difficult

College Name	MAB Categories														Engineering Programs	Enq. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Colby College																	X		55
College of the Atlantic																			55
Clark University			X		X							X							59
Tufts University										X			X		Env. Health, Env.		X	X	NA
Worcester Polytechnic Institute																			63
Michigan Technological University		X								X					Civil				67
University of Michigan	X	X			X					X		X		Sanitary, Water Res.		X	X	67	
University of Minnesota		X	X		X				X	X		X		Env.		X	X	X	69
University of Missouri - Rolla										X				Env., Sanitary				NA	
Washington University									X	X								76	
William Jewel College																		76	
University of New Hampshire		X	X						X									81	
New Mexico Institute of Mining and Technology					X					X		X		Civil		X		84	
New York University		X			X							X				X	X	X	88

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PROGRAM SEARCH GUIDE - 6

Very Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C				
Rensselaer Polytechnic Institute					X					X	X							Env.			89	
Syracuse University		X									X			X				Sanitary, San. Sci.			91	
Union College																					91	
Case Western Reserve University					X		X												X		98	
Wittenburg University																				X	X	101
Reed College																						105
Willamette University																						105
Albright College																						105
Allegheny College					X																	106
Carnegie Mellon University											X			X				Civil	X	X		NA
Drexel University											X							Env. Science				107
Franklin and Marshall College																						107
Gettysburg College																						108
Lehigh University					X																	108

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PROGRAM SEARCH GUIDE - 7

Very Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Muhlenburg College																			109
Pennsylvania State University		X			X				X	X	X	X	X	X	Sanitary, Env. Pollution Control				110
University of Pennsylvania	X				X					X	X			X	Civil and Urban	X	X	X	112
University of Rhode Island									X	X					Civil and Env.		X	X	113
Furman University																			114
University of South Carolina					X				X				X		Civil		X		115
University of the South																			118
Vanderbilt University		X			X				X	X			X		Env. and Water Res.				119
Baylor University																			120
Stephen F. Austin State University		X	X																122
University of Vermont		X			X												X	X	128
University of Virginia					X					X	X	X					X	X	131
University of Washington		X	X		X						X				Env.	X	X	X	133
Beloit College																			137

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PROGRAM SEARCH GUIDE - 8

Moderately Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C				
University of Alaska		X	X		X													Oceanography				3
Arizona State University			X	X		X								X					X	X		4
University of Arizona		X	X	X	X				X				X					Sanitary	X			5
University of Arkansas		X							X	X				X				Env., Civil		X	X	7
California State College, Bakersfield																						7
California State University, Fresno																						9
California State University, Los Angeles													X									10
California State University, San Jose														X				Env., Civil				10
Humboldt State University		X	X		X											X		Env. Resource				11
Loma Linda University																						12
San Francisco State University																			X	X	X	12
San Jose State University																				X	X	13

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PROGRAM SEARCH GUIDE - 9

Moderately Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
University of California, Los Angeles	X												X			X	X	X	15
University of the Pacific					X									X		X	X		18
University of San Diego																			19
University of Southern California										X	X	X		X		X	X		19
Adams State College																			20
Colorado State University		X	X		X	X		X		X				Env.		X	X	X	20
University of Colorado, Boulder					X	X					X			Env., Water Res., and Sanitary		X	X	X	22
University of Northern Colorado						X											X	X	23
University of Bridgeport																X	X	X	24
Delaware State College																			26
University of Delaware								X		X				Civ., App. Sci.			X	X	26
American University	X	X	X	X	X											X	X	X	27
George Washington University									X	X			X	Civ., Env.		X	X		28

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PROGRAM SEARCH GUIDE - 10

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College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Florida A & M University									X										29
Florida Institute of Technology														X	Env., Env. Science	X	X		29
Florida Technological University					X							X			Env., Env. Systems Mgmt.				29
Stetson University																			30
University of Florida	X	X	X		X				X	X			X		Env.	X			31
University of Miami (Fla)	X				X				X	X			X		Civil	X	X	X	32
University of South Florida	X															X	X	X	32
University of Georgia	X	X	X		X				X	X		X				X	X		33
University of Hawaii, Manoa	X		X				X		X		X	X			Env., Sanitary				34
University of Idaho		X			X	X			X	X	X				Civil	X	X	X	35
Governor's State University										X									37
Illinois State University									X							X	X	X	37
Southern Illinois University, Carbondale		X														X	X	X	38

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PROGRAM SEARCH GUIDE - 11

Moderately Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Southern Illinois University, Edwardsville																			39
Ball State University																	X		41
Butler University																			41
Franklin College																			42
Indiana University, Bloomington																X	X		42
Indiana University, South Bend										X									43
Iowa State University		X	X		X			X		X			X		Sanitary, Water Resources	X	X	X	46
Iowa Wesleyan																			47
University of Iowa										X					Env.	X	X	X	NA
University of Northern Iowa																			47
Kansas State University			X		X			X		X					Civil		X	X	48
Ottawa University																X			49
University of Kansas										X			X		Env. Health, Env. Health Sci.	X	X	X	NA

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PROGRAM SEARCH GUIDE - 12

Moderately Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Eastern Kentucky University					X											X			49
Murray State University					X														50
University of Kentucky		X							X		X				Civil				50
Western Kentucky University			X								X				Eng. Technology (Env. option)				51
Centenary College of Louisiana																	X		51
Louisiana State University		X							X							X			52
McNeese State University		X			X														53
University of Maine - Orono		X			X				X		X				Sanitary				55
Frostburg State College																			56
University of Maryland, College Park					X	X			X										57
Boston State University																			58
Boston University					X				X							X	X		59
Hampshire College																		X	60

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- (1) Tropical Forests (2) Temperate Forests (3) Grazing Lands (4) Arid Zones (5) Fresh Water
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PROGRAM SEARCH GUIDE - 13

Moderately Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Northeastern University					X						X				Env., Env. Science	X	X	X	61
Southeastern Massachusetts University					X														62
University of Massachusetts - Amherst		X	X		X			X		X					Civil, Env.		X	X	62
Calvin College																	X		63
Central Michigan University		X			X												X	X	64
Grand Valley State Colleges																			64
Hope College																	X	X	65
Lake Superior State College					X														65
Michigan State University	X	X			X			X		X	X		X		Civil, Sanitary	X	X	X	66
Wayne State University					X					X					Sanitary	X	X		68
Western Michigan University									X	X		X				X	X	X	69
Morehead State University			X														X	X	69
Mississippi State University		X						X											71

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PROGRAM SEARCH GUIDE - 14

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College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
University of Mississippi					X												X		71
Central Missouri State University			X																72
Northeast Missouri State University									X										73
Northwest Missouri State University									X								X		73
St. Louis University											X						X	X	74
Southwest Missouri State University									X						Env. Chem. Tech.			X	74
University of Missouri, Columbia		X	X	X	X				X	X			X		Civil				74
Kearney State College																			78
University of Nevada, Reno		X	X	X	X	X			X	X					Hydrological		X		79
Glassboro State College																			81
New Jersey Institute of Technology											X				Env.		X		NA

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PROGRAM SEARCH GUIDE - 15

Moderately Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Rutgers University	X				X			X		X	X		X		Env.	X	X		82
Upsala College																			83
William Paterson College of New Jersey																			83
New Mexico State University			X		X											X	X		84
City University of New York					X								X			X	X		85
Eisenhower College of R. I. T.																			88
Hofstra University																X	X	X	88
Manhattan College					X					X					Env., Env. Science		X		NA
Polytechnic Institute of New York										X			X		Civil, Env. Health				NA
State University of New York, Stony Brook	X				X				X				X				X	X	89
Appalachian State University																			91
Catawba College					X														92

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PROGRAM SEARCH GUIDE - 16

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College Name	MAB Categories														Engineering Programs	Eng. Language			Page	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C		
High Point College											X	X		X					92	
Lenoir - Rhyne College																		X	93	
North Carolina State University	X	X	X		X	X			X		X				Civil		X	X	X	94
University of North Carolina, Greensboro					X														96	
Baldwin - Wallace College																			98	
Heidelberg College																			99	
Miami University (Ohio)											X				Civil				99	
University of Cincinnati					X						X				Env.		X	X	NA	
Western College of Miami University																			100	
Oklahoma State University		X	X		X				X		X				Env.		X	X	X	101
University of Oklahoma										X	X	X			Civil, Env.				103	
Oregon State University		X	X			X			X		X				Sanitary		X	X		103
Portland State University																	X			104

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PROGRAM SEARCH GUIDE - 17

Moderately Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Delaware Valley College of Science and Agriculture									X										106
Elizabethtown College																			107
Juniata College																			108
Lebanon Valley College																			108
Mercyhurst College																			109
Moravian College																			109
Clemson University		X						X	X		X			Env. Systems		X	X	114	
South Dakota State University			X		X			X		X	X			Eng.(Interdisciplinary)		X	X	116	
Carson - Newman College																		116	
Middle Tennessee State University										X		X		Env. Science and Technology		X		117	
University of Tennessee		X			X			X	X					Env.		X	X	118	
Abilene Christian University			X		X			X										119	
Angelo State University			X	X	X													120	

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- (1) Tropical Forests (2) Temperate Forests (3) Grazing Lands (4) Arid Zones (5) Fresh Water
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(A) Program (B) Course (C) Counseling
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PROGRAM SEARCH GUIDE - 18

Moderately Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Sam Houston State University											X								121
Texas A & M University		X	X		X	X			X		X				Env., Env. Science	X			123
University of Texas, Austin										X	X		X		Env. Health, Civil	X	X	X	125
University of Texas, San Antonio					X					X									125
Brigham Young University			X					X		X					Env.	X	X		125
Utah State University		X	X	X	X	X		X		X					Env., Civil	X	X		126
Goddard College																			127
St. Michael's College																X	X	X	128
Bridgewater College																			129
George Mason University	X				X								X						130
Old Dominion University										X					Civil				130
Virginia Polytechnic Institute and State University		X			X			X		X			X		Sanitary, Civil, Env. Science				131
Central Washington State University					X			X											132

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- (1) Tropical Forests (2) Temperate Forests (3) Grazing Lands (4) Arid Zones (5) Fresh Water
 (6) Mountains (7) Islands (8) Biosphere Reserves (9) Pesticides/fertilizer (10) Engineering works
 (11) Urban ecosystems (12) Demographic change (13) Perception of environmental quality (14) Pollution
- (A) Program (B) Course (C) Counseling
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PROGRAM SEARCH GUIDE - 19

Moderately Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Evergreen State College					X														132
Washington State University		X	X		X			X		X			X		Env., Civil, Env. Science	X	X		133
Western Washington State College																			135
West Virginia Wesleyan College																			136
Carthage College																			137
Marquette University										X					Env.				NA
Mount Senario College																	X		137
Northland College																			138
University of Wisconsin - Green Bay					X					X	X		X				X	X	138
University of Wisconsin - Madison		X			X			X		X			X		Civil, Env.	X			139
University of Wisconsin - Platteville								X	X										141
University of Wyoming		X	X		X			X									X		142

(1) Tropical Forests (2) Temperate Forests (3) Grazing Lands (4) Arid Zones (5) Fresh Water
(6) Mountains (7) Islands (8) Biosphere Reserves (9) Pesticides/fertilizer (10) Engineering works
(11) Urban ecosystems (12) Demographic change (13) Perception of environmental quality (14) Pollution
(A) Program (B) Course (C) Counseling (NA) Not in text

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Less Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Alabama A & M University			X										X					1	
Tuskegee Institute	X																	2	
Southeastern Senior College				X														3	
Fort Lewis College																		21	
Indiana Central University																		42	
University of Southwestern Louisiana					X			X							X	X	X	54	
University of Southern Mississippi									X	X					X			72	
North Carolina A & T University													X					93	
University of North Dakota				X												X	X	97	
Akron State University										X					Civil			NA	
Ohio University										X					X	X	X	101	

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- (1) Tropical Forests (2) Temperate Forests (3) Grazing Lands (4) Arid Zones (5) Fresh Water
 (6) Mountains (7) Islands (8) Biosphere Reserves (9) Pesticides/fertilizer (10) Engineering works
 (11) Urban ecosystems (12) Demographic change (13) Perception of environmental quality (14) Pollution
 (A) Program (B) Course (C) Counseling (NA) Not in text
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Less Difficult

College Name	MAB Categories														Engineering Programs	Eng. Language			Page	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C		
Southeastern Oklahoma State University				X													X	X	102	
Tennessee Technological University					X												X	X	X	117
Sul Ross State University			X																	122
Tarleton State University			X					X												122
Marshall University																				135
West Virginia University		X						X		X					Env.		X	X		136
University of Wisconsin, River Falls																				142

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- (1) Tropical Forests (2) Temperate Forests (3) Grazing Lands (4) Arid Zones (5) Fresh Water
(6) Mountains (7) Islands (8) Biosphere Reserves (9) Pesticides/fertilizer (10) Engineering works
(11) Urban ecosystems (12) Demographic change (13) Perception of environmental quality (14) Pollution
(A) Program (B) Course (C) Counseling
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Noncompetitive

College Name	MAB Categories														Engineering Programs	Enq. Language			Page
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		A	B	C	
Arkansas Technical University																			6
Louisiana Technical University		X														X	X	X	52
Northeast Louisiana University																			53
Montana State University			X	X				X	X						Env., Env. Health				76
University of Montana		X	X	X															77
University of Nebraska, Lincoln		X						X	X						Sanitary		X	X	78
University of Nebraska, Omaha				X				X								X	X	X	79
North Dakota State University		X	X	X				X	X						Env.				96
Cleveland State University																			99
Ohio State University		X	X	X					X	X	X				Water Res.	X	X		100
Lincoln Memorial University				X															117
Texas Tech University			X	X				X											124

(1) Tropical Forests (2) Temperate Forests (3) Grazing Lands (4) Arid Zones (5) Fresh Water
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(A) Program (B) Course (C) Counseling
