

**Descriptions — Agriculture and Natural Resources  
of  
Courses**

**410. Environmental Toxicology**  
Winter. 4(4-0) BS 212, BCH 401.  
Interdepartmental with and administered by  
the College of Natural Science.

Fate and effects of toxic chemicals in soil, plants,  
wildlife, and aquatic systems. Interactions  
between chemicals and the environment which  
influence their fate and ecological importance.

**425. Agriculture and Natural Resources  
Seminar**  
Spring. 2(2-0)

Current agricultural, natural resources, and  
environmental problems and solutions as pre-  
sented by discussion leaders from various disci-  
plines, arranged by undergraduate students.

**445. Pest Management: Pesticide  
Chemistry and Application  
Systems for Plant Protection**  
Fall. 5(3-4) CEM 143, ENT 425, HRT  
402 or CSS 402, BOT 405 or concurrently or  
approval of instructor. Interdepartmental with  
and administered by the College of Natural Sci-  
ence.

A broad overview of pesticide chemistry, effi-  
cient usage, environmental fate, legislation and  
application techniques.

**446. Pest Management: Biological  
Systems for Plant Protection**  
Fall. 3(3-0) ENT 425, HRT 402 or CSS  
402, BOT 405 or concurrently or approval of  
instructor. Interdepartmental with and admin-  
istered by the College of Natural Science.

Management of plant pests utilizing host resist-  
ance, cultural practices, legislation, and biologi-  
cal systems.

**447. Pest Management: Systems  
Management for Plant Protection**  
(ANR 444.) Winter. 4(3-2) NSC 445,  
NSC 446 or approval of instructor. Interdepart-  
mental with and administered by the College of  
Natural Science.

Designed to integrate knowledge and improve  
ability in arriving at pest management decisions  
of varying complexity involving the fields of  
agronomy, wildlife, horticulture, entomology,  
and plant pathology.

**450. Natural Resource Administration**  
Winter. 4(4-0) Seniors; not open to fore-  
stry majors. Interdepartmental with the  
departments of Fisheries and Wildlife, Forestry,  
Park and Recreation Resources and Resource  
Development. Administered by the Department  
of Forestry.

Concepts and methods of administering  
wildland properties. The legal, economic and  
social environment. Benefit-cost analysis of  
management changes. Unit organization, per-  
sonnel management and accounting. Presents a  
systems view of administration.

**455. Natural Resource Economics**  
Fall. 4(4-0) Approval of department.  
Interdepartmental with the departments of  
Fisheries and Wildlife, Forestry, Park and Rec-  
reation Resources and Resource Development.  
Administered by the Department of Forestry.  
Basic economic and political principles and tech-  
niques that govern the production and consump-  
tion of forest land products, including basic  
forest valuation procedures.

**462. Agricultural and Rural  
Development in Developing  
Nations**  
Fall. 3(3-0) PAM 201 or EC 201; PAM  
260 recommended. Interdepartmental with  
Public Affairs Management, and Food Systems  
Economics and Management. Administered by  
Food Systems Economics and Management.

Traditional agricultural systems and the incen-  
tive environment for economic growth in rural  
areas. Adjustment to technological, institutional  
and human change. Strategies for rapid agricul-  
tural transformation.

**475. International Studies in  
Agriculture and Natural Resources**  
Spring, Summer. 3 to 9 credits.  
Approval of college.

Study-travel experience emphasizing contempo-  
rary problems affecting agriculture in the world,  
national, and local communities. Field trips,  
case studies, interviews with leading experts,  
government officials, community leaders.  
Supervised individual study.

**480. Selected Topics**  
Fall, Winter, Spring, Summer. 1 to 4  
credits. May reenroll for a maximum of 9 credits  
if different topics are taken. Approval of depart-  
ment. Juniors.

Exposition of special topics in agriculture and  
natural resources.

**491. Natural Resources and Modern  
Society**  
Spring. 3(3-0) Juniors. Interdepart-  
mental with the departments of Forestry, and  
Resource Development. Administered by the  
Department of Forestry.

A survey of the social and economic significance  
of natural resources in modern industrial and  
urban society. Current problems of natural  
resources management and use are examined in  
terms of the society in which they exist.

**AMERICAN STUDIES AMS**

**College of Arts and Letters**

**301. Issues in American Civilization**  
Fall. 3(3-0) May reenroll for a maxi-  
mum of 9 credits. Sophomores.  
Selected issues in American life past and present,  
with materials drawn from such disciplines as  
history, social sciences, philosophy, literature  
and the arts. Topics vary.

**378. Popular Culture and Technical  
Change**  
Winter. 4(4-0) Juniors or approval of  
department. Interdepartmental with and  
administered by Lyman Briggs School.  
Interrelationships among elements of mass cul-  
ture and technical change. Introduction to rele-  
vant research methods.

**410. Perspectives in American Studies**  
Winter. 3(3-0) Juniors, approval of  
American Studies adviser.  
Methods and significant works, for majors in the  
American Studies program. Offered by mem-  
bers of the relevant departments.

**411. Problems in American Civilization**  
Spring. 3(3-0) May reenroll for a maxi-  
mum of 6 credits if different topic is taken. Jun-  
iors, approval of American Studies adviser.

Seminar approach to selected problems in Ameri-  
can life employing the objectives and  
approaches of interdisciplinary studies. Offered  
by members of relevant departments, for majors  
in the American Studies program.

**AMERICAN THOUGHT  
AND LANGUAGE ATL**

**College of Arts and Letters**

To satisfy the University General Education  
requirement, a student must take one course in  
each of the following groups. No courses may be  
taken for elective credit.

1. 1144, 121, 131, 141, 151, 161, 171, 181,  
191H
2. 1154, 122, 132, 142, 152, 162, 172, 182,  
192H
3. 1164, 123, 133, 143, 153, 163, 173, 183,  
193H

**0142. Writing Laboratory I**  
Fall, Winter, Spring. 0(0-2) [2(2-0) See  
page A-1 item 3.] ATL 0991 or admission by  
placement test; ATL 1144 concurrently.

An individualized program to develop composi-  
tion skills by aiding students to discover how lan-  
guage functions in communication and by  
helping them to accept responsibility for learn-  
ing to write correctly.

**0152. Writing Laboratory II**  
Fall, Winter, Spring. 0(0-2) [2(2-0) See  
page A-1 item 3.] ATL 0142, ATL 1144 or  
approval of department; ATL 1154 concu-  
rently.  
Continuation of ATL 0142.

**0162. Writing Laboratory III**  
Fall, Winter, Spring. 0(0-2) [2(2-0) See  
page A-1 item 3.] ATL 0152, ATL 1154 or  
approval of department; ATL 1164 concu-  
rently.  
Continuation of ATL 0152.

**0991. Preparatory Writing Skills**  
Fall, Winter, Spring, Summer. 0(3-0)  
[3(3-0) See page A-1 item 3.] Admission by place-  
ment test.  
Instruction and practice in writing. Emphasis on  
mastery of fundamental skills needed for a vari-  
ety of writing assignments.

**104. Writing for Science Majors**  
Fall. 3(3-0) Satisfactory grade in Eng-  
lish proficiency exam; College of Natural Sci-  
ence majors. Interdepartmental with and  
administered by the Department of English.  
Writing workshop for science students that  
develops and refines composition ability.

**105. The Scientist as Writer**  
Winter. 3(3-0) ENG 104. Interdepart-  
mental with and administered by the Depart-  
ment of English.  
Study of various types of writing by scientists—  
fiction, poetry, and autobiography as well as  
professional papers and books. Students will  
write frequently about the readings.