

Natural Resource Conservation and Management

UK

Bachelor of Science in Natural Resource
Conservation and Management
Effective: August 1, 2000

The program in Natural Resource Conservation and Management is designed to provide you with the knowledge and skills needed for a career in the rapidly growing fields of environmental science and policy. As the world population grows, and as nations are drawn closer together through technology and trade, the conservation and management of natural resources will become increasingly important to the sustained well-being of all societies.

The curriculum provides you with exposure to a broad array of key disciplines involved with natural resources. As a result, graduates have the ability to integrate different perspectives and diverse bodies of knowledge in dealing with real resource management problems.

You have the opportunity to specialize in either a science or a policy option. Whichever option you choose, you share a common core of courses and have the opportunity to examine both the technical and socioeconomic dimensions of resource issues.

Students have the opportunity to follow policy or science options within this program. In addition, each student will develop an 18-hour concentration area in a special interest area. Examples of potential concentration areas include geographic information systems, geology, biology, public policy, wildlife management and wetlands, soil and water science, business, communications, and international development. Some students may want to consider expanding their concentration areas into academic minors such as business, agricultural economics, plant and soil science, biology, and geology.

Career Opportunities

Graduates of the Natural Resource Conservation and Management curriculum are employed as professionals in both the public and private sectors. Industries that have an impact upon the environment maintain a staff of environmental scientists and technicians to ensure compliance with the standards of our society. Government agencies employ broadly-trained natural resource scientists to serve in a regulatory or management function for the resources in their jurisdiction. Additional employment opportunities exist in environmental journalism and education, and with the many non-profit organizations that have environmental concerns. Students in either the science or policy option are well-prepared for graduate programs dealing with resource and environmental issues, and in traditional academic disciplines. Thus all graduates from this program have a broad array of career possibilities from which to choose.

Graduation Requirements

To earn a Bachelor of Science in Natural Resource Conservation and Management, you must complete 128 semester hours with at least 48 hours from courses at the 300 level and above. A 2.0 grade point standing (on a 4.0 scale) is necessary and remedial courses cannot be counted toward the total hours required for the degree. In addition to University Studies Program requirements, you must satisfy College, pre-major, major, and elective course requirements. With the assistance of an academic advisor, each student will choose an option and a concentration area. Each student will attend a three-week camp during the summer following the sophomore year where he or she will be exposed to a variety of natural resource systems.

University Studies Program Requirements (USP)

I. Basic Skills

A. Mathematics (3 hours)

Completed by one of the following

1. A score of ≥ 26 on mathematics section of ACT or
2. A bypass examination or
3. MA 109 *College Algebra* or
4. Any calculus course (satisfies section II-A requirement)

B. Foreign Language (0-8 hours)

Completed by one of the following

1. Two years of the same foreign language in high school or
2. Two courses in the same foreign language at the university level.

II. Inference and Communicative Skills

A. Inference (3-5 hours)

MA 123 *Elementary Calculus & Its Applications* or
MA 113 *Calculus I*

B. University Writing (3-6 hours)

Completed by one of the following:

1. ENG 101/102 *Writing I and II* (6 hours) or
2. Students who score ≥ 29 on the English section of the ACT and who pass an English proficiency examination may satisfy the University Writing requirement by passing ENG 105 *Writing: An Accelerated Course* (3 hours).

C. Oral Communication

Students who begin their first academic year in the College of Agriculture will satisfy this requirement by completing GEN 100 and GEN 200 (required under College Requirements).

Other students will take 3 hours from approved list under the communications requirement in the UK Bulletin or schedule book, and GEN 200.

III. Disciplinary Requirements

A. Natural Sciences (6 hours)

BIO 150—*Principles of Biology I* and
BIO 152—*Principles of Biology II*

B. Social Sciences (6 hours)

ECO 201—*Principles of Economics* and
SOC 260—*Population, Resources and Change*

C. Humanities (6 hours)

Six hours from USP approved list.

IV. Cross-Disciplinary Requirement (6 hours)

Students must take a minimum of six hours of courses of their choosing. At least three hours must be outside the student's major. Students in the science option satisfy this requirement with CHE 105 *General College Chemistry I*, CHE 107 *General College Chemistry II*, and CHE 115 *General College Chemistry Laboratory*.

V. Cross-cultural Requirement

Three hours from the USP approved list.

College Requirements: 6-9 hours

General Requirements: 6 hours

GEN 100—*Issues in Agriculture: The Development of Modern Agriculture**

GEN 200—*Issues in Agriculture: Contemporary Problems in Agriculture and Natural Resources*

* Students transferring into the College of Agriculture after completing their first academic year in another UK major or at another university are only required to take GEN 200.

A. Business or Technical Writing: 3 hours

ENG 203—*Business Writing* or
ENG 204—*Technical Writing*

B. Complete a proposed plan of study for third and fourth years.

Science Option

Pre-Major Requirements (35-42 hours)

BIO 150—Principles of Biology I	3
BIO 151*—Principles of Biology Laboratory	2
BIO 152—Principles of Biology II	3
BIO 153*—Principles of Biology Laboratory II	2
CHE 105—General College Chemistry I	3
CHE 107—General College Chemistry II	3
CHE 115—General Chemistry Laboratory	3
CHE 226—Analytical Chemistry	4
or	
CHE 236—Survey of Organic Chemistry	3 and
CHE 231—Organic Chemistry Laboratory I	2
or	
CHE 230—Organic Chemistry I	3 and
CHE 231—Organic Chemistry Laboratory I	2
MA 123—Elementary Calculus and Its Applications	3 or
MA 113—Calculus I	4 and
MA 193—Supplementary Mathematics Workshop	1
ECO 201—Principles of Economics I	3
STA 291—Statistical Method	3
GLY 220—Physical Geology	4
SOC 260—Population, Resources, and Change	3
*Recommended laboratory courses	

Major Requirements

Core Courses: 35-39 hours

NRC 301—Natural Resource Conservation & Management	3
NRC 320—Data Collection Technique	3
NRC 330—NEPA Compliance	3 or
AEC 300—Environmental Law	2
NRC 380—Analysis of Natural Resource Systems	3
NRC 381—Natural Resource Policy Analysis	3
NRC 399—Experiential Education in Natural Resources	3
or	
NRC 395—Independent Study in Natural Resources	3
NRC 450G—Soil and Water Biogeochemistry	3
NRC 471—Senior Problem in Natural Resources	3
AEC 445—Introduction to Resource and Environmental Economics	3
PLS 366—Fundamentals of Soil Science	3
PLS 367—Soil and Water Analysis Laboratory	3
FOR 340—Forest Ecology	3

Concentration Area Electives: 18 hours

Free Electives: 10-18 hours

Policy Option

Pre-Major Requirements (28-34 hours)

BIO 150—Principles of Biology I	3
BIO 151*—Principles of Biology Laboratory	2
BIO 152—Principles of Biology II	3
BIO 153*—Principles of Biology Laboratory II	2
CHE 105—General College Chemistry I	3
MA 123—Elementary Calculus and Its Applications	3 or
MA 113—Calculus I	4 and
MA 193—Supplementary Mathematics Workshop	1
ECO 201—Principles of Economics I	3
ECO 202—Principles of Economics II	3
STA 291—Statistical Method	3
GLY 220—Physical Geology	4
SOC 260—Population, Resources, and Change	3
*Recommended laboratory courses	

Major Requirements

Core Courses: 35-39 hours

NRC 301—Natural Resource Conservation & Management	3
NRC 320—Data Collection Technique	3
NRC 330—NEPA Compliance	3 or
AEC 300—Environmental Law	2
NRC 380—Analysis of Natural Resource Systems	3
NRC 381—Natural Resource Policy Analysis	3
NRC 399—Experiential Education in Natural Resources	3
or	
NRC 395—Independent Study in Natural Resources	3
NRC 471—Senior Problem in Natural Resources	3
AEC 445—Introduction to Resource and Environmental Economics	3
AEC 483—Regional Economics	3
AEC 545—Resource Economics	3
FOR 340—Forest Ecology	3
SOC 420—Community Analysis	3

Concentration Area Electives: 18 hours

Free Electives: 10-18 hours

Concentration Area: 18 hours

In addition to the core courses, each student, in consultation with his or her academic advisor, will select 18 hours of courses that will constitute the student's Concentration Area. Three of these hours must be from an approved list of applied natural resource courses. Students should check with their advisor for a list of the approved courses.

Suggested Schedule

If you enroll at UK during your first semester, you may follow this suggested schedule. Use this schedule only as a guide, since schedules will vary if: you have previously attended another college, you have earned credit by examination or via a high school advanced placement course, or you are not starting in the fall semester. Your faculty advisor will assist you in course selection and career planning.

This schedule assumes the foreign language component of the University Studies Program (USP) was completed in high school.

Science Option

First Year

Fall Semester (16-18 hours)

CHE 105—General College Chemistry I	3
ECO 201—Principles of Economics I	3
ENG 101—Writing I	3
GLY 220—Physical Geology	4
MA 123—Elementary Calculus and Its Applications ...	3 or
MA 113—Calculus I	4 and
MA 193—Supplementary Mathematics Workshop	1

Spring Semester (15-17 hours)

BIO 150—Principles of Biology I	3
BIO 151*—Principles of Biology Laboratory I	2
CHE 107—General College Chemistry II	3
CHE 115—General Chemistry Laboratory	3
ENG 102—Writing II	3
GEN 100—Issues in Agriculture: The Development of Modern Agriculture	3
*Recommended laboratory course	

Second Year

Fall Semester (15-17 hours)

BIO 152—Principles of Biology II	3
BIO 153*—Principles of Biology Laboratory II	2
ENG 203—Business Writing	3
STA 291—Statistical Method	3
USP Humanities	3
Elective	3
*Recommended laboratory course	

Spring Semester (16 hours)

CHE 226—Analytical Chemistry	4
GEN 200—Issues in Agriculture: Contemporary Problems in Agriculture and Natural Resources	3
NRC 301—Natural Resource Conservation & Management ..	3
PLS 366—Fundamentals of Soil Science	3
PLS 367—Soil and Water Analysis Laboratory	3

Summer (3 hours)

NRC 320—Data Collection Technique	3
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Third Year

Fall Semester (15 hours)

FOR 340—Forest Ecology	3
NRC 380—Analysis of Natural Resource Systems	3
AEC 445—Introduction to Resource and Environmental Economics	3
NRC 381—Natural Resource Policy Analysis	3
Concentration Area Elective	3

Spring Semester (16 hours)

NRC 330—NEPA Compliance	3
or	
AEC 325—Environmental Law	3
NRC 450G—Soil and Water Biogeochemistry	3
SOC 260—Population, Resources and Change	3
USP Humanities	3
Concentration Area Elective	3

Summer (3 hours)

NRC 399—Experiential Education in Natural Resources	3
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Fourth Year

Fall Semester (15 hours)

Concentration Area Electives	6
USP Cross Cultural	3
Electives	6

Spring Semester (15 hours)

NRC 471—Senior Problem in Natural Resources	3
Concentration Area Electives	6
Electives	6

Policy Option

First Year

Fall Semester (16-18 hours)

CHE 105—General College Chemistry I	3
ECO 201—Principles of Economics I.....	3
ENG 101—Writing I.....	3
GLY 220—Physical Geology.....	4
MA 123—Elementary Calculus and Its Applications . 3 or MA 113—Calculus I	4 and
MA 193—Supplementary Mathematics Workshop.....	1

Spring Semester (15-17 hours)

BIO 150—Principles of Biology I.....	3
BIO 151*—Principles of Biology Laboratory I.....	2
ECO 202—Principles of Economics II	3
ENG 102—Writing II	3
GEN 100—Issues in Agriculture: The Development of Modern Agriculture	3
USP Cross Disciplinary	3

*Recommended laboratory course

Second Year

Fall Semester (15-17 hours)

BIO 152—Principles of Biology II.....	3
BIO 153*—Principles of Biology Laboratory II	2
ENG 203—Business Writing	3
STA 291—Statistical Method	3
USP Cross Cultural	3
USP Humanities.....	3

*Recommended laboratory course

Spring Semester (15 hours)

GEN 200—Issues in Agriculture: Contemporary Problems in Agriculture and Natural Resources.....	3
NRC 301—Natural Resource Conservation & Management ..	3
SOC 260—Population, Resources and Change.....	3
USP Cross Disciplinary	3
USP Humanities.....	3

Summer (3 hours)

NRC 320—Data Collection Technique.....	3
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Third Year

Fall Semester (15 hours)

AEC 445—Introduction to Resource and Environmental Economics	3
FOR 340—Forest Ecology	3
NRC 380—Analysis of Natural Resource Systems	3
NRC 381—Natural Resource Policy Analysis	3
Concentration Area Electives	6

Spring Semester (15 hours)

AEC 483—Urban Regional Economics.....	3
NRC 330 —NEPA Compliance	3

or

AEC 300—Environmental Law.....	2
SOC 420—Community Analysis.....	3
Concentration Area Electives	6

Summer (3 hours)

NRC 399—Experiential Education in Natural Resources	3
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Fourth Year

Fall Semester (15 hours)

AEC 545—Resource Economics	3
Concentration Area Electives	6
Electives.....	6

Spring Semester (15 hours)

NRC 471—Senior Problem in Natural Resources.....	3
Concentration Area Electives	3
Electives.....	9

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