

Northern Marianas College
CURRICULUM ACTION REQUEST

Effective Semester / Session: Fall 2012

Type of Action:

- New
- Modification
- Move to Inactive (Stop Out)
- Cancellation

Course Alpha and Number: NR 153

Course Title: Environmental Conservation

Reason for initiating, revising, or canceling:

This course is being modified for periodic updates.


Dr. Alfredo B. De Torres

Proposer

23 Feb 12
Date


Dr. Alfredo B. De Torres

Department Chair

23 Feb 12
Date


Ms. Barbara Merfalen

Dean of Academic Programs and Services

24 Feb 12
Date

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Course Guide

Course: NR 153 Environmental Conservation

1. Department

Sciences, Mathematics, Health and Athletics

2. Purpose

NR 153 is the second core/program requirement course in the Natural Resources Management, Associate in Science degree. Natural Resources Management is an inter-disciplinary program that emphasizes a theoretical and applied approach to agriculture, environmental, and natural resources production, assessment, classification, problem or phenomena mitigation, policy, and related conservation issues. The course attempts to explore the scope and nature of natural resource conservation efforts or movements. This includes an appreciation and understanding of the social, scientific and political context that attempts to balance the issues of environmental protection, sustainable resource management, and economic growth.

3. Description

A. Required/Recommended Textbook(s) and Related Materials

Required:

Chiras, Daniel D., and John P. Reganold. *Natural Resource Conservation*. 10th ed. New Jersey. Pearson Prentice Hall, 2010.

Readability level: Grade 10

Furey, John, et. al. *Island Ecology & Resource Management*. Saipan, MP: Northern Marianas College Press, 2006.

Readability level: Grade 10

Conservation Biology/Course Readings (Scientific/Technical Reports and Journal Articles, including handouts on specific topics will also be assigned and/or distributed).

B. Contact Hours

1. **Lecture:** 3 hours per week / 45 per semester

2. **Lab:** Science/field lab and investigations, 3 hours per week / 45 per semester

3. **Other:**

C. Credits

1. **Number:** 4, including 1 credit of science lab

2. **Type:** Regular degree credits

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D. Catalogue Course Description

NR 153 continues the study of human impact on the use, degradation, restoration, and the long-term sustainable management of land, sea, water, and air. Topics may include, but not limited to the following: assessment, methodology for conservation, and sustainable management of public health and sanitation; solid waste; water and air pollution; farmlands and rangelands; and alternative technology. Students will participate in discussions and conducts hands-on laboratory including field investigations. Prerequisite: NR 150 with a grade of C or better. English Placement Level: EN 093/094. Math Placement Level: MA 091; or consent of the instructor.

E. Degree or Certificate Requirements Met by Course

This course fulfills the core/program requirement in the A.S. degree program in Natural Resources Management. This course will serve as a science elective for non-majors in NRM and other related degree programs.

F. Course Activities and Design

This course incorporates lectures, guest speakers, audiovisual presentations, student oral presentations, take-home and web-based assignments, class projects/case reports, laboratory/field exercises, field trips, periodic quizzes, exams, and a comprehensive final exam. Students will be required to participate fully in all class activities.

4. Course Prerequisite(s); Concurrent Course Enrollment; Required English/Mathematics Placement Level(s)

Prerequisite(s): NR 150 with a grade of C or better

English Placement Level: EN 093/094

Math Placement Level: MA 091; or consent of the instructor (COI)

5. Estimated Cost of Course; Instructional Resources Needed

Cost to the Student: Tuition for a 4-credit course; cost of textbook and materials and lab fees.

Cost to the College: Instructor's salary.

Instructional resources needed for this course include classroom and laboratory space, chalkboard/whiteboard and supplies, TV/VCR, videotaped programs and supplies/materials, digital camera, video flex camera attachment for microscopes, stereo and compound microscopes, microscope slides and cover slips, electronic board and multimedia

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projector, basic laboratory/field supplies and access to computers and Internet.

6. Method of Evaluation

Student learning will be evaluated on the basis of class participation, oral presentations, assignments, class project, laboratory/field trip reports, quizzes, exams, and comprehensive final exam.

Student grades will be based on the regular letter grade system as described below:

- A: Excellent – grade points: 4.0;
- B: Above average – grade points: 3.0;
- C: Average – grade points: 2.0;
- D: Below average – grade points: 1.0;
- F: Failure – grade points: 0.0.

NMC's grading and attendance policies will be followed.

7. Course Outline

This is a topical outline and does not necessarily indicate the sequence in which the material will be presented.

1.0 Course Overview/Syllabus

- 1.1 Introduction to the course/instructor/students
- 1.2 Policies and requirements

2.0 Introduction to Environmental/Resource Conservation

- 2.1 Concepts and definitions
- 2.2 Historical and legal perspective
- 2.3 Resources/species management issues: Endangered Species Act (ESA)
- 2.4 Case studies and project identifications

3.0 Community/Public Health and Sanitation

- 3.1 Quality of human life on planet earth
- 3.2 Conservation, economics, and sustainability
- 3.3 Values and ethics in conservation
- 3.4 Human population and the earth's carrying capacity
- 3.5 Case studies and/or project presentations

4.0 Waste Management

- 4.1 Solid and hazardous waste

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- 4.2 Reuse/recycle approach
- 4.3 Ecosystem conservation
- 4.4 Case studies and/or project presentations

5.0 Threats and Practical Considerations

- 5.1 Threats to biodiversity: Habitat fragmentation and loss; and pollution
- 5.2 Threats to aquatic systems: Freshwater and marine environments
- 5.3 Air pollution and noise
- 5.4 Case studies and/or project presentations

6.0 Farmland and Rangeland Management

- 6.1 Soil conservation and sustainable agriculture
- 6.2 Pesticides
- 6.3 Sustainable water resource management
- 6.4 Alternative technology

8. Instructional Goals

This course will introduce students to:

- 1.0 An understanding of the roles of economics and ethics on human population and the planets carrying capacity, with particular focus on the Pacific Island states;
- 2.0 The sources and difficulties of managing solid and hazardous wastes;
- 3.0 Sustainable pollution management and the eventual prevention of water, air and noise pollution; and
- 4.0 The concepts and methodology of soil conservation, sustainable agriculture and water resource management.

9. Student Learning Outcomes

Upon successful completion of this course, students will be able to:

- 1.0 Understand the roles of economics and ethics on human population and the planet's carrying capacity, with a particular focus on the Pacific Island states;
- 2.0 Explain the sources and difficulties of managing solid and hazardous wastes;

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- 3.0 Characterize sustainable pollution management with the eventual prevention of water, air, and noise pollution; and
- 4.0 Demonstrate the concepts and methodology of soil conservation, sustainable agriculture and water resource management.

10. Assessment Measures

Assessment of student learning may include, but not be limited to, the following:

- 1.0 Periodic pre- and post- evaluation (recitations, quizzes, examinations, including a final comprehensive examination) to determine the student's standard knowledge and understanding in relation to the modular topics discussed in this course.
- 2.0 Assessment of class research project involving any of the following reports: Cases, field-based investigations or laboratory experimentations using the basic concepts and principles learned in this course.
- 3.0 Evaluation of the student presentations/reactions/discussions on the basis of the assigned readings pertaining to the particular environmental/natural resources.