Northern Marianas College
CURRICULUM ACTION REQUEST

Effective Semester / Session: Fall 2018

Type of Action:

	New
X	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 guide is being modified for periodic updates.

Dr. Alfredo B. De Torres — 3-28-19

Proposer — Date

Dr. Alfredo B. De Torres — 3-28-19

Department Chair — Date

Adam Walsh — 05.20.19

Language & Format Review Specialist — Date

Ajani Burrell — 4/5/19

Academic Council Chair — Date

Charlotte Cepeda — 6/11/19

Dean, Learning and Student Success — Date

1. **Department**
   Natural Resource Management

2. **Purpose**
   NR 153 is the second core/program required course in Natural Resource Management, Associate in Science degree. Natural Resource Management is an inter-disciplinary program that emphasizes a theoretical and applied approach to agriculture, environmental, natural resource 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 (Ed.), *Island Ecology & Resource Management*, in Press.

   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.

   Recommended: N/A

   B. **Contact Hours**
   1. **Lecture:** 3 per week / 45 per semester
   2. **Lab:** 3 per week / 45 per semester
   3. **Other:** N/A

   C. **Credits**
   1. **Number:** 4
   2. **Type:** Regular degree credits

D. Catalogue Course Description

NR 153 continues the study of human impact on the use, degradation, restoration, and long-term sustainable management of land, sea, water, and air. Topics may include, but are not limited to the following: assessment, methodology for conservation, sustainable management, public health and sanitation, solid waste, water and air pollution, farmlands and rangelands, alternative technologies. Students will participate in discussions and conduct hands-on laboratory work, including field investigations. Prerequisite: NR150 with a grade of C or better. English Placement Level: EN095. Math Placement Level: MA091

E. Degree or Certificate Requirements Met by Course

This course fulfills the core/program requirements in the A.S. degree program in Natural Resource Management. This course also serves 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 project/case reports, laboratory/field exercises, field trips, periodic quizzes, tests, and a comprehensive final exam.

4. Course Prerequisite(s); Concurrent Course Enrollment

Prerequisites: NR150 with a grade of C or better
Concurrent Course Enrollment: N/A

Required English/Mathematics Proficiency Level(s)

English Placement Level: EN095
Mathematics Placement Level: MA091

5. Estimated Cost of Course; Instructional Resources Needed

Cost to the Student: Tuition for a 4-credit course, cost of textbook, and instructional materials fee.

Cost to the College: Instructor's salary.

Instructional resources needed for this course include classroom and laboratory space, chalkboard/whiteboard with 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, electric board and multimedia projector, plus basic laboratory/field supplies and access to computers and the internet.

6. Method of Evaluation

Student progress will be evaluated on the basis of class participation, oral presentations, assignments, laboratory/field trip reports, quizzes, tests, a class project, and comprehensive final exam. 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 Introduction to Environmental/Resource Conservation
- 1.1 Concepts and definitions
- 1.2 Historical and legal perspectives
- 1.3 Resources/species management issues: Endangered Species Act (ESA)
- 1.4 Case studies and project identification

2.0 Community/Public Health and Sanitation
- 2.1 Quality of human life
- 2.2 Conservation, economics, and sustainability
- 2.3 Values and ethics in conservation
- 2.4 Human population and earth's carrying capacity

3.0 Waste Management
- 3.1 Solid and hazardous waste
- 3.2 Reuse/recycle approach
- 3.3 Ecosystem conservation

4.0 Threat and Practical Considerations
- 4.1 Threats to biodiversity: habitat fragmentation, loss, and pollution
- 4.2 Threats to aquatic systems: freshwater and marine environments
- 4.3 Air pollution and noise

5.0 Farmland & Rangeland Management
- 5.1 Soil conservation and sustainable agriculture
- 5.2 Pesticides
- 5.3 Sustainable water resource management
- 5.4 Alternative technologies

8. Instructional Goals

The course will introduce students to:

1.0 Economic and ethical roles on human population and the planet's carrying capacity—with a 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 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;

3.0 Characterize and correlate sustainable pollution management with the 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 of Student Learning Outcomes

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

1.0 Recitation;

2.0 Quizzes;

3.0 Tests;

4.0 Research Project; and

5.0 Comprehensive Final Exam