# Northern Marianas College
## CURRICULUM ACTION REQUEST

**Effective Semester / Session:** Fall 2012

**Type of Action:**

_ New
X Modification
_ Move to Inactive (Stop Out)
_ Cancellation

**Course Alpha and Number:** NR 253

**Course Title:** Species & Ecosystem Management

**Reason for initiating, revising, or canceling:**
This course guide is being modified for periodic updates and addition of textbook.

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Dr. Alfredo B. De Torres — 29 Feb 2012
Proposer — Date

Dr. Alfredo B. De Torres — 29 Feb 2012
Department Chair — Date

Barbara Merfalen — 3.26.12
Dean of Academic Programs and Services — Date

# Northern Marianas College
# Course Guide

**Course:** NR 253 Species and Ecosystem Management

1. **Department**
   Sciences, Mathematics, Health and Athletics

2. **Purpose**
   NR 253 is the third core/program 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. This degree provides academic training and on-the-job experience with a student focus on utilization, conservation, and protection of our land, sea, water, and air.

3. **Description**

   A. **Required/Recommended Textbook(s) and Related Materials**
   Required:
   Meffe, G. K., et. al. *Ecosystem Management: Adaptive, Community-Based Management*. Washington D.C. Island Press, 2002.
   Readability level: Grade 12

   Furey, John (Ed.). *Island Ecology & Resource Management*. Saipan, MP: Northern Marianas College Press, 2006.
   Readability level: Grade 10

   Handouts on specific topics will also be distributed.

   B. **Contact Hours**
   1. **Lecture:** 3 hours per week / 45 per semester
   2. **Lab:** Science lab, 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

   D. **Catalogue Course Description**
   NR 253 examines the species and ecosystems of coral reefs, forest, savanna, and wetlands. Topics include relationships between organisms, between organisms and their environment, endangered species, and the wise use of resources. Global and regional aspects are stressed; three hours of lecture with laboratory/field trips required.

Prerequisite: NR 153. English Placement Level: EN 101. Math Placement Level: MA 132; or permission/consent of the instructor (COI).

**E. Degree or Certificate Requirements Met by Course**
This course fulfills the requirement for the A.S. degree program in Natural Resources Management. It also serves as a science elective for other major 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, laboratory 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 153
English Placement Level: EN 101
Math Placement Level: MA 132; or permission/consent of instructor (COI)

**5. Estimated Cost of Course; Instructional Resources Needed**
Cost to the Student: Tuition for a 4-credit course; the cost of the textbook and instructional fee.

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, digital camera, video flex camera attachment for microscopes, stereo and compounds microscopes, microscope slides and cover slips, multimedia projector, and basic laboratory and field supplies.

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## 6. Method of Evaluation

Student progress will be evaluated on the basis of class participation, oral presentations, assignments, class project, laboratory exercises, 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 is presented.

1.0 Environmental Geology
- 1.1 Volcanism
- 1.2 Weathering and erosion
- 1.3 Faulting
- 1.4 Aquifers and caves

2.0 Coral Reef Ecology
- 2.1 Species
- 2.2 Monitoring
- 2.3 Management

3.0 Wildlife/Vegetation Species
- 3.1 Forest
- 3.2 Savanna
- 3.3 Wetlands
- 3.4 Monitoring
- 3.5 Management

4.0 Fishery Ecology
- 4.1 Species
- 4.2 Monitoring
- 4.3 Management

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**8. Instructional Goals**

This course will introduce students to:

1.0 The knowledge and understanding of environmental geology;

2.0 The organisms that comprise and live in the habitat of coral reefs;

3.0 The organisms that comprise the habitats of forests, savannas, and wetlands; and

4.0 Fishery ecology.

**9. Student Learning Outcomes**

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

1.0 Demonstrate knowledge and understanding of environmental geology;

2.0 Identify and discuss the organisms that comprise and live in the habitat of coral reefs;

3.0 Identify and discuss the interactions of the organisms that comprise the habitats of forests, savannas, and wetlands; and

4.0 Explain and discuss fishery ecology.

**10. Assessment Measures**

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

1.0 Periodic testing and a comprehensive final examination to evaluate the student's knowledge and abilities in cognitive reasoning and learning;

2.0 Field investigations and lab reports;

3.0 Class participation in exercises and in discussions;

4.0 Homework and/or assignments;

5.0 A research project investigating a particular interest in species and ecosystem management issues; and

6.0 A presentation of the student's selected research topics.