

Northern Marianas College
CURRICULUM ACTION REQUEST

Effective Semester / Session: Spring 2006

Type of Action:

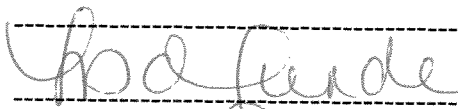

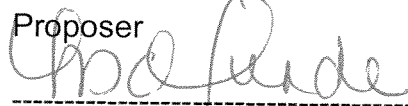







- New
- Modification
- Cancellation

Course Alpha and Number: PE 134

Course Title: Advance Scuba Diving

Reason for initiating, revising, or canceling:

This course guide is being submitted for approval since there is no signed copy on file. The course guide has been modified to reflect changes in the textbook, the certification, departmental name and to fulfill the 3 year periodic review requirement.

	
Proposer	Date
	
Department Chair	Date
	
English and Format Reviewer	Date
	
Academic Council Chair	Date
	
Dean of Academic Programs and Services	Date

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Course: PE 134 Advance Scuba Diving

1. Department

Human Performance and Athletics

2. Purpose

This course introduces students to knowledge and techniques needed for advanced SCUBA diving and intermediate-level dive rescue applications. Students will gain a deeper understanding of principles of physics and physiology as they relate to diving, learn how SCUBA equipment works, and become familiar with specialized equipment for dive rescue operations. Diving lifesaving is covered in depth as well, including CPR, first aid, and DAN oxygen management. Emphasis is placed on the development of advanced diving and rescue water skills and knowledge.

3. Description

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

Required:

PADI: Adventures in Diving (Student Manual), International PADI, Inc.
Revised 11/04

B. Contact Hours

1. **Lecture:** 3 hours per week / 20 per semester
2. **Lab:** 4 hours per week/25 per semester
3. **Other:**

C. Credits

1. **Number:** 3
2. **Type:** Regular degree credits

D. Catalogue Course Description

This course expands on the theory, methods and applications of SCUBA diving introduced in PE 133.

Prerequisite: PE 133 or Instructor's permission.

English Placement Level: EN 073/074

E. Degree or Certificate Requirements Met by Course

A passing grade in this class fulfills the Physical Education requirement under General Education requirements for a Liberal Arts Degree. Successful completion will also result in the student being certified as a PADI Open Water Diver.

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F. Course Activities and Design

Course activities include labs, lectures, group discussions, homework assignments, and viewing and discussion of videotapes/slide presentations. The lab activity consists of participating in actual dives at various off-campus locations. Student presentations, quizzes, examinations, and evaluations will be part of the course. A water skills test and final examination are required. Students are required to participate fully in class discussions and labs. Students will also be required to demonstrate hands-on skills with lines and small boats, watermanship skills in skin and SCUBA diving, and rescue skills.

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

Prerequisites: a "C" grade or better in PE 133 or permission of instructor.

Concurrent Course Enrollment: NONE

English Placement Level: EN 073/074 (or by permission of the instructor)

5. Estimated Cost of Course; Instructional Resources Needed

Cost to the Student: Tuition for a 3-credit course, instructional materials fee, SCUBA diving lab fee, and cost of student manual.

Cost to the College: Instructor's salary, SCUBA diving equipment and compressed air.

Instructional resources needed for this course include: white board and white board markers, TV/VCR and videotaped programs, slide projector and slides, slide projector screen, overhead projector, and transparency film.

6. Method of Evaluation

Students' 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.

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7. Course Outline

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

1.0 Applied Sciences

- 1.1 Physics for advanced diving
- 1.2 Physiology for advanced diving
- 1.3 Medical aspects of advanced diving
- 1.4 Diving skills and tasks involving
 - 1.4.1. Buoyancy control
 - 1.4.2. Pressure changes
 - 1.4.3. Air consumption.
 - 1.4.4. Personal limitations

2.0 Diving Equipment

- 2.1 Care of equipment
- 2.2 Detailed functioning
- 2.3 Specialized gear and applications
- 2.4 Technical information on SCUBA mechanics

3.0 Safe Diving Procedures

- 3.1 Lifesaving
- 3.2 CPR/first aid
- 3.3 DAN oxygen management
- 3.4 Dive planning
- 3.5 Emergency procedures

4.0 Diving Environment

- 4.1 Physical and biological aspects of the environment
- 4.2 Identification of plants and animals
- 4.3 Underwater Navigation
- 4.4 Using a compass for navigation
- 4.5 Natural navigation
- 4.6 Distance travel underwater, time and range

5.0 Limited Visibility Diving

- 5.1 Functioning safely and effectively in dirty water or at night
- 5.2 Techniques, hazards, and safety procedures

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- 6.0 Search and Recovery
 - 6.1 Selecting an appropriate search pattern and method of a given area
 - 6.2 Searching using the proper techniques
 - 6.3 Problem solving

- 7.0 Deep and Simulated Diving
 - 7.1 Anticipating and prevention problems, and utilizing concepts, methods, and equipment in deep diving
 - 7.1.1. Safety procedures for deep diving

- 8.0 Diving Lifesaving
 - 8.1 Self-rescue
 - 8.2 Diver assists
 - 8.3 Surface and underwater rescues
 - 8.3.1. Transport
 - 8.3.2. In-water artificial respiration
 - 8.3.3. Boat and shore exit techniques
 - 8.3.4. First aid application
 - 8.3.5. Oxygen administration

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8. Instructional Goals

This course will introduce students to:

- 1.0 The principles of physics and physiology as they relate to SCUBA diving;
- 2.0 The function, care, and maintenance of SCUBA and dive rescue equipment;
- 3.0 Dive safety practices;
- 4.0 Important elements of the diving environment;
- 5.0 Underwater navigation using natural aids to navigation and the compass;
- 6.0 The techniques and hazards of, and safety procedures for, limited-visibility diving;
- 7.0 Search and recovery methods;
- 8.0 Theory, problem solving, hazards, and methods of salvage operations;
- 9.0 Special consideration for deep diving;
- 10.0 Causes and prevention of diving accidents; and
- 11.0 Diving lifesaving.

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9. Student Learning Outcomes

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

- 1.0 Explain the principles of physics and physiology as they relate to SCUBA diving;
- 2.0 Explain and demonstrate the function, care, and maintenance of SCUBA and dive rescue equipment;
- 3.0 Explain and exhibit dive safety practices;
- 4.0 Understand and interpret important elements of the diving environment;
- 5.0 Navigate underwater using natural aids and a compass;
- 6.0 Identify the techniques and hazards of, and safety procedures for, limited-visibility diving;
- 7.0 Explain and demonstrate search and recovery methods;
- 8.0 Describe the theory, problem solving, hazards, and methods of salvage operations;
- 9.0 Understand and describe the special consideration for deep diving;
- 10.0 Understand and explain the causes and prevention of diving accidents; and
- 11.0 Explain and demonstrate diving lifesaving procedures and skills.

Assessment Measures

Assessment of student learning may include the following:

Student learning is evaluated based on class participation, attendance, periodic take-home quizzes, in-class quizzes, and a final exam. Students will also be evaluated on mastery of intermediate and advanced SCUBA diving skills. The Open Water certifications are based on completion of PADI knowledge reviews, quizzes, final examination, demonstrated mastery of intermediate, and advanced SCUBA diving skills, and completion of the required in-water work.