

(1) the principles of the science of conservation biology and the contributions of several different integrative levels (molecular, physiology, genetic, population, ecology, earth system science) of biology to problems in conservation biology.

This course will provide an overview of:

- (2) the framework of organizations, laws, programs, and land management systems that are specifically focused on identifying, protecting, and maintaining natural diversity in the U.S., in selected other nations, and in international programs.
- (3) case studies of specific threatened, endangered, or declining plants and animals, including the ecology and biology of the organisms, factors leading to their decline, and management and recovery methods and strategies.
- (4) an overview of the conservation status of some major habitat regions of the world with an emphasis on northern hemisphere and high latitude areas but including ecosystems of particular interest from the tropics, oceans and elsewhere.
- (A) The first part of the course is primarily lecture format. The goal is to cover the scientific principles of conservation biology and the main values-based rationales that drive conservation biology. Early in the course, students will choose and download an endangered species recovery plan from the U.S. Fish and Wildlife Service website.
- (B) In the second half of the class students will be involved in analysis and presentation, applying the principles covered in the first part. Students will present their species recovery plan and analyze the effectiveness of the Endangered Species Act based on the sample of plans presented in class. In general students will be expected to analyze institutions and programs that work to maintain natural diversity in the second part of the course. Focus will be balanced between the U.S and Canada, (r)-6 Shaasity in the U.S.,

- A. The history and programs of The Nature Conservancy, "Conservation by Design" Natural Heritage Programs.
- B. Landscape-scale preservation: The National Park System and the National Wilderness Preservation System, National Forests, Wildlife Refuges, and BLM Public lands.
- C. International organizations & natural diversity: IUCN, CITES.
- D. Features and provisions of the U.S. Endangered Species Act (criteria for listing and the listing process, critical habitat and Section 7 sanctions, multi-species listings, Habitat Conservation Plans, Recovery Plans and goals, de-listing).
- A. Case studies of endangered animal recovery history and plans (Whooping Crane, Black-

I. Quizzes, Midterm, and Final Exam - 60% of Course Grade

Students will be examined on material from <u>lecture handouts</u>, the <u>text</u>, <u>assigned documents</u> downloaded from the <u>Internet</u>. There will be regular short quizzes (about 6 in number) on the basic factual content of the material assign for the course. Quizzes will total 20% of the overall grade. A midterm exam will include both short answer questions and short explanation or problem type questions. The midterm exam will total 20% of the overall grade. The final exam will total 20% of the overall grade. *Learning Objectives* will be provided that will highlight the most important information to master as a guide to quizzes and exams.

The goals are to:

- 1. Give the students an incentive to complete their reading assignments in pace with the presentation of lecture material, and to review in greater depth the topics that are introduced in lectures.
- 2. Highlight common knowledge that all student completing the course can be expected to know.
- 3. Provide the opportunity to review and retain factual information in a written form.
- 4. Provide a forum for responses that demonstrate integrative thinking, deductive reasoning, and well-developed and more extended responses.

II. Student Presentation - 30% of Course Grade

Students will be called upon to give 1 time-limited oral report on an official Endangered Species Recovery Plan. Recovery Plans selected for the presentation must be approved <u>in advance</u> by the instructor. Students are encouraged to select a topic for which they have some special background because of work or life experience, special interest, or curriculum background. Reports will be in the form of briefings, such as an employee of a private or public resource agency might be called upon to give to explain a recommended conservation policy. Students will be evaluated by the instructor on both the content and effectiveness of the presentation, including responses to critical questions following the presentation.

The goals are to:

- 1. Make students aware of a substantial body of conservation biology literature, some of it quite recent, that includes popular, semi-technical, and technical information, and to promote good reading habits.
- 2. Give students experience in summarizing a specific topic within a strictly limited time for

- 2. Interaction between the instructor and the students (questions from and to students, ability of students to respond when challenged) is an important aspect of education within the course.

 3. Attendance is a tangible demonstration of the seriousness of the student toward the course.

- 1. Submit the Powerpoint presentation 2 full days before you are scheduled to present, so that it can be checked and posted on the Blackboard site. A deduction will be applied for late files.
- 2. Address and summarize <u>each</u> of the sections of the recovery plan; the required sections are the same in all plans and we want to compare them.
- 3. Do not overemphasize the <u>biology</u> of the species to the exclusion of all else; include budgetary and management issues as well.
- 4. Use <u>visual aids</u> where they are the most effective way of conveying the information (e.g. charts of numbers, distribution maps).
- 5. Get to the main point <u>quickly</u>; there is no time for "warm up" or digressions.
- 6. Summarize and <u>synthesize</u>; present the most interesting or critical facts, don't get lost in long lists of details.
- 7. Evaluate the material you have encountered. Is it reliable, complete, reasonable, do the plans correspond to the facts, etc? Tm[4.)]TJETBT/1.57 392.-9@05600iD 2.41 0 93.663r8 ref*BT1 0 0 1 122.iD f1