

East Tennessee State University  
SCED 4010: Wildlife Conservation

**Department:** Curriculum and Instruction / Science Education

**Semester Hours:** 3semester hours credit

**Text(s) and / or suggested readings:** Miller, G. T. Jr. & Spoolman, S. E. (2012). 17th edition. *Living in the Environment*, Belmont: Wadsworth Publishing Company, Inc. (15<sup>th</sup> or 16<sup>th</sup> editions are similar and acceptable)

## **I. Catalog Description**

SCED 4020 prerequisite: Eight credits of science. Relationships of wild plants and animals to the physical environment and to other organisms, including humans, with emphasis on human attempts to restore and maintain habitats.

### **Additional Course Information:**

Wildlife Conservation 4020 is specifically designed to fill several professional needs of the elementary and secondary teacher. Most everything we do will be related to use in the classroom. This course is not a pure science course and is not designed for science majors. The course does however; welcome anyone who has a desire to learn more about how humans interact with other living things on the planet and how to convey this information to young students.

This course is considered as a content course and much information about the interdependence of all living things with each other and with the environment will be emphasized. It is common knowledge that this topic is extremely broad: therefore, it will be necessary to examine selected topics having a strong relationship to the title of the course. The main criterion for making the selections of the topics to be covered will be how applicable the information is to the classroom teacher. Many times throughout the semester, students will be given hints about how to use the information in the classroom. Students will be greatly rewarded professionally if, they listen and take part in class discussions and activities.

Wildlife Conservation 4020 supports the College of Education's mission statement and program philosophy by preparing knowledgeable and competent educators in their respective disciplines. This is especially important in science education, a field that is constantly adapting to new advances in knowledge. To prepare students for the 21<sup>st</sup> century, the course combines ideas from biology, chemistry, and geology to present a general idea of how nature works and how things are inter connected. The course places a strong emphasis on helping students acquire knowledge through appropriate concrete experiences. The course also places high value on inquiry as an important component of science teaching and learning.

## **II. Goals:**

1. To identify and supply valuable information about the importance of other creatures with whom man shares earth and how they relate to man and the total world ecology.
2. To make the elementary and secondary teacher aware of the potential for motivating students to learn by using examples of wildlife for which most young people seem to have a natural interest.
3. To develop an appreciation for the outdoors to the extent that the teacher, or anyone else, will grow knowledge of it and find enjoyment in sharing his or her information and enthusiasm with others.
4. To acquire a general knowledge of the great variety and extensive numbers of wildlife species which occurred in North America before the arrival of European settlers.
5. To examine the history and reasons for the exploitation and destruction of wildlife species in North America, starting with Colonial America.
6. To become familiar with the structure and functioning of several examples of ecosystems.
7. To learn about the emergence of a conservation consciousness and how an effective wildlife management program evolved.
8. To acquire a general knowledge of the characteristics of the major biomes of North America and the special adaptations of some example plants and animals found in each one.
9. To develop an understanding of the known causes for the extinction of animal species and why so many species are on the endangered list.
10. To examine some of the problems that have been caused by the introduction of exotic species.
11. To make an effort to project what the future may be for wildlife in the United States and in other parts of the world.
12. To become familiar with some of the literature which could be most helpful in learning about the topics included in the Table of Contents, and which would be excellent sources of help to the teacher who would like to utilize the holistic approach to teaching.
13. To become familiar with some of the state and federal organizations which specialize in wildlife conservation and how they can and will help the classroom teacher.

### **III. Content:** Introduction—The Importance of Wildlife

#### A. Environmental History of the United States

#### B. The Heritage of the American Colonists

1. The major biomes of North America and some representative animals and plant life.
2. The unique wealth of food animals along the coastal areas.

#### C. A time of exploration and exploitations

1. The fate of the buffalo
2. The extinction of the passenger pigeon.

#### D. The interdependence of living things with each other and with their physical environment.

1. The components of an ecosystem
2. Energy capture and flow through the ecosystem.
3. Description and examples of biotic succession
4. Some properties of ecosystems (stability, resilience, diversity, capacity)

#### E. Using knowledge of animal behavior to help manage wildlife populations.

1. Importance of knowing about animal behavior when helping animals survive as a result of human pressure on their environment.
2. Definition of terms specifically related to the science of animal behavior (ethology, territoriality, circadian rhythms, dispersal, imprinting, migration)
3. Examples which can be found among animals to illustrate each of the above-mentioned behavioral terms.

#### F. The evolution of a consciousness for conservation in America.

1. The influence of extinction or near extinction of several species of animals..
2. Social and economic shock caused by the dustbowl event of the 1930's.
3. Disasters resulting from industrial and agricultural practices.
4. People who made effective contributions to practice and spirit of conservation in America—Audubon, Thoreau, Marsh, Muir, Pinchot, T. Roosevelt, Leopold, Carson, etc.

#### G. Setting aside examples of our varied and beautiful natural heritage for both use and enjoyment by all posterity.

#### I. Endangered and threatened wildlife.

1. Distinction between endangered and threatened species.
2. Natural and man caused reasons for extinction or endangerment of species.
3. Classic examples of problems caused by the introduction of exotic species.
4. General characteristics for animals which are likely to become endangered or threatened.
5. Special problems facing organisms which have evolved on isolated islands.

#### J. Wildlife management—The hope for tomorrow.

1. Historical steps to conserve wildlife in America.

2. Federal laws that aid wildlife.
3. Funding wildlife conservation efforts.
4. Examples of successes in restoring populations of endangered and/or threatened species.
5. The need for international cooperation.

#### K. History and Development of the Great Smokey Mountains National Park

### IV. Class Procedures:

- A. Lecture / discussion / hands-on activities / demonstrations / ideas for the elementary-middle school classroom / wildlife related job opportunities / guest speakers / related video clips / internet websites / student presentations (*all PowerPoint presentations will be posted on D2L at the end of each session*)
- B. Guest speakers: local outdoors professionals
- C. Other topics as advised by a consensus of the class.
- D. Reading assignments from the textbook as posted on D2L website.
- E. Research extension points via student presentations using technology.

### V. Evaluation

#### ➤ Exams

Three (3) examinations will be given, including the final. Students will be notified a week or more in advance of exam dates. **Any exam missed will be made up by the student on the following test date.**

#### ➤ Attendance

Students with good class attendance generally do better in this class and in life in general. We will often talk about agendas, test questions and facts in class that are not brought up in the PowerPoint presentations. Video clips, hands-on activities and guest speakers are designed to help students prepare for the exams and future careers.

If a student has nine (9) unexcused absences his/her final grade average will automatically be dropped three points / ten unexcused absences = another three points, etc. Students with four absences or fewer will have their final average, averaged up (*example, an 89.5 or above would be averaged to a 90*)

Note: *for an excused absence student must have a documented medical excuse and present it the next day in class. An excused absence will not count in the absence total.*

#### ➤ Journal Article Summaries on 5 x 8 Cards

Each student is to turn in **twelve (12)** journal summaries from a minimum of **six (6)** different journals. All summaries must be taken from full length articles rather than a short news item. Students will write a brief summary of the article on a **5" X 8"** note card (*continue on back of card if necessary*). At the top of each summary, student should include: his/her name plus a complete, up-to-date, APA citation. Each summary will have a value of 8.3 points, if accepted, making a total of 100 points. If all the reports are turned in on time, the total value of the summaries will be treated as a 100, and this grade will be averaged with the three examinations.

Remember to include “**page numbers**” for article summaries. If page numbers are not given don’t use the source. Late cards will be penalized “one point per summary per class late”. Other opportunities for report topics may be posted during the semester.

Use APA style: <http://owl.english.purdue.edu/owl/resource/560/01/>

**See sample “journal article summary” on 5 x 8 card, under “content” on class D2L**

The following is a partial list of helpful journals:

<i>American Forests</i>	<i>National Geographic</i>
<i>Audubon</i>	<i>Parks and Recreation</i>
<i>Auk</i>	<i>Ranger Rick</i>
<i>Conservationist</i>	<i>Smithsonian</i>
<i>Geographic World</i>	<i>Tennessee Conservationist</i>
<i>International Wildlife</i>	<i>Tennessee Wildlife</i>
<i>National Wildlife</i>	<i>Your Big Backyard</i> (for preschoolers)

Obviously some of the above journals are intended to appeal to young people. *Geographic World* for example, is directed toward early elementary students. Middle school students would likely be interested in *Ranger Rick*. You, as their future teachers, should at least examine them and be thinking about how you could use the journals in your classroom. Several of the journals listed above appear on the magazine racks of most middle school and / or high schools. All of the above journals can be found in the ETSU Sherrod library, 2<sup>nd</sup> floor.

### ➤ **Wildlife-Related Detailed Lesson Plan**

A wildlife-related detailed lesson plan that focuses on some phase of wildlife conservation will be required of each student. Details of this assignment will be presented separately in class. This project will be a fifth grade to be averaged with the three exams and journal summary cards. (*a handout will be available in class and online*).

A four page research paper for non-education majors is also an option but not encouraged. This is in place of the detailed lesson plan.

### **GRADING SCALE:**

A = 94-100	A- = 92-93	
B+ = 90-91	B = 83-89	B- = 81-82
C+ = 79-80	C = 72-78	C- = 70-71
D+ = 68-69	D = 61--67	
	F = below 61	

### **IMPORTANT DATES TO REMEMBER**

Feb. 6 ..... 3 article summaries due\*  
Feb. 27. .... 3 article summaries due\*  
Mar. 20 ..... 3 article summaries due\*  
Apr 10 ..... 3 article summaries due \*

April 17 ..... **Wildlife Lesson Plan / Research Paper due** (*work will not be accepted after this date without a major penalty. Do not email paper as an attachment; hard copies only.*)

May 29. ....No late work will be accepted after this date

*\*Note: Article summaries are due at start of class on this date. Summaries turned in later in the day will be marked late. Summaries will be accepted early, listen for dates in class. Work ahead and consider doing lesson plan on topics from cards.*

# **NCTQ Standards and Indicators for National Review of Teacher Preparation as aligned with SCED4020**

## **Standard 6: Elementary Content**

*The institution prepares teacher candidates with content understanding necessary to teach the Common Core Standards as well as the full elementary curriculum, and have expertise in a single subject.*

- 6.1 Course content must be broad enough to give candidates the knowledge base to teach the elementary curriculum.

## **Standard 10: Classroom Management**

*The program insures that teacher candidates learn and practice specific techniques for managing the classroom.*

Indicators that the program (class) meets the standards:

- 10.1 They specifically address the teacher candidates' ability to establish a positive learning environment and reinforce standards of classroom behavior.

## **Standard 11: Practice Planning Instruction**

*The program (class) requires teacher candidates to design and adjust instruction to enhance the academic performance of all students.*

- 11.1 Identifying technology applications that will boost instruction.
- 11.2 Anchoring instruction to the state's K-12 learning standards.
- 11.3 Addressing the needs of English language learners.
- 11.4 Accommodating students with special needs.
- 11.5 Extending instruction for students who have demonstrated proficiency in relevant standards.
- 11.6 None of the class instructional planning assignments encourage candidates to use pseudo-scientific methods of instruction.

## **Standard 12: Measurement**

*The program (class) requires that teacher candidates gain a thorough overview of student assessment that includes practicing analyzing student performance data to drive instruction.*

- 12.2 Teacher candidates are required to prepare formative and summative classroom assessments.

## COURSE SECTION INFORMATION - SCED 4020

**Instructor:** Alan Redmond, M.A., Ed. S., 30 + years with the Kingsport City Schools, science teacher, coach, administrator / 2 ½ years on-loan to Eastman Chemical Company—Eastman's first school liaison / 22 years summer science enrichment program director / Presidential Award for Excellence in Secondary Science Teaching—White House Rose Garden / National Catalyst Award for Excellence in Secondary Chemistry Teaching nominated by Eastman—White Sulphur Springs / Who's Who Among America's Teachers- 1<sup>st</sup> edition, nominated by former students / National Science Teachers Association STAR Award—New York / National Science Teachers Association Ohaus Innovations in Science Teaching Award--Boston / Tennessee 1<sup>st</sup> District Teacher of the Year--Nashville / Tennessee Academy of Science Outstanding Science Teacher--Tullahoma / Board of Directors Tennessee Science Teachers Association / Manuscript Review Panel *Science Scope* magazine / NSTA National Laboratory Safety Committee / Designer of Hands-On Museum's Eastman Discovery Lab / numerous state and national publications-teacher workshops / volunteer with Bays Mountain Park, Hands-On Regional Museum, area schools. ETSU Science Career Adventure, director.

**Office hours** 7:45-8:15 and after 11:05-11:35 or as needed in Brown Hall 216.

**Email:** [redmond@etsu.edu](mailto:redmond@etsu.edu)

**Phone:** ETSU Department of C and I; 439-7587 *leave message.*

### References

- \*Alsop, F.J. (1991) \* *Birds of the Smokies*. Gatlinburg, TN: Great Smoky Mountains Association.
- \*Ambrose, S. (1996) *Undaunted Courage*. New York: Simon and Schuster.
- \*Dary, D. (2004) *The Oregon Trail: An American Saga*. New York: Alfred Knopf.
- \*Freinkel, S. (2007) *American Chestnut: The Life, Death and Rebirth of a Perfect Tree*. Berkeley: U. of CA Press.
- \*Ellis, R. (2009). *On Thin Ice*. New York: Alfred A. Knopf
- \*Kemp, S. (1993) *Trees of the Smokies*. Gatlinburg, TN: Great Smoky Mountains Association.
- \*Kephart, H. (1976) *Our Southern Highlanders*. Knoxville: U. of Tennessee Press.
- Midgley, M. (1984). *Animals and Why They Matter*. Athens: University of Georgia Press.
- \*Miller, G. T, Jr. & Spoolman, S. E. (2012). *Living in the Environment*, 17<sup>th</sup> edition. Belmont: Wadsworth Publishing Company, Inc.
- \*Morgan, R. (2007). *Boone: a biography*. Chapel Hill: Algonquin Books.
- \*Peterson, R. T. (2002). *Birds of Eastern and Central North America*. Boston: Houghton-Mifflin.
- \*Pivorun, E., Harvey, M., Van Manen, F., Pelton, M., Clark, J., Delozier, K., and Snyder, B. (2009) *Mammals of the Smokies*. Gatlinburg, TN: Great Smoky Mountains Association.
- \*often mentioned in class discussions

Students wishing to discuss accommodations due to a disability are invited to make an appointment with the instructor to go over their Faculty Accommodation Form provided by Disability Services.

**Mental Health:** Students often have questions about mental health resources, whether for themselves or a friend or family member. There are many resources available on the ETSU Campus, including: ETSU Counseling Center (423) 439-4841; ETSU Behavioral Health & Wellness Clinic (423) 439-7777; ETSU Community Counseling Clinic: (423) 439-4187.

- **If you or a friend are in immediate crisis, call 911.**
- Available 24 hours per day is the National Suicide Prevention Lifeline: 1-800-273-TALK (8255).