

Sample Syllabus: Insects as Educational Tools for the Classroom Entomology 810, 3 credit hours

Instructor:

Dr. Doug Golick

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Email is the preferred way to reach me. I am often away from my office and would be happy to schedule a phone call if needed.

Other Course Contacts:

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WHAT YOU WILL LEARN

This course offers a general overview of insects and explores how they can be used in the classroom to enhance science education. Topics include insect diversity, classification of insects and other organisms, insect structure and function, insect behavior, and science inquiry.

WHY TAKE THIS COURSE?

- Insects are just about everywhere you look.
- Children are fascinated by insects!
- Insects are just plain fun to learn about and work with.
- Insects are great tools to teach biological concepts.
- Insects are readily available, inexpensive, and easy to maintain.

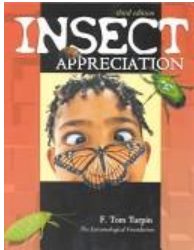
COURSE GOALS

When you finish this course, you will be able to:

- describe the diversity of insects and basics of insect biology
- identify major insect groups
- use the scientific method to make discoveries about living things
- better teach using arthropods
- critique and improve arthropod lessons
- develop simple demonstrations and experiments to stimulate students' interest in insects and science

Required TEXTBOOK (see text below)

Turpin, Tom. 2002. *Insect Appreciation*, 3rd edition, Kendall/Hunt Publishing Company. This book is scanned and available - with the author's permission - in the Module 1 section of the Blackboard site. You may purchase a hardbound copy if you find reading the scanned version difficult.



OPTIONAL TEXTBOOKS

Kneidel, Sally. 1993. *Creepy Crawlies and the Scientific Method*, Fulcrum Publishing Company.

Hassard, Jack. 2000. *Science as Inquiry*, Good Year Books.

Textbooks are available online through several sources, including: Amazon (amazon.com), Barnes and Noble (barnesandnoble.com), Bigwords (bigwords.com) and others. The cost will vary somewhat. Go wherever you will get the best deal or where it is most convenient for you. And do not wait -- buy your texts as soon as possible.

COURSE EVALUATION PROCEDURES

Module 1:

Module 1 provides an overview on reasons to study insects, the classification system, insect biology, and specific insects for classroom use. This module consists of eleven lectures covered over a 2 week time period*. The

objectives of these quizzes are to encourage weekly preparation and to provide feedback on your understanding of the course content. You will also host an "ArthroPet" to learn about insect life cycles and behaviors. You will conduct activities with your bug buddy that tests your observational skills of insect behaviors.

Module 2:

Module 2 focuses on science inquiry and provides you with the opportunity to gain experience in teaching science inquiry lessons with insects. This module also serves as a stepping-stone to developing your own science inquiry lessons. In order to successfully complete this module, you must present a guided inquiry lesson to students and complete the 'Classroom Instruction and Evaluation of Inquiry Lesson' worksheet for the inquiry lessons presented. You will also evaluate entomology-based lessons found throughout both research journal and online sources.

Module 3:

Module 3 requires you to incorporate the content knowledge on insects learned in Module 1 with the steps of the inquiry process to generate unique inquiry investigations for K-20 classrooms. You will also complete a final entomology teaching project - details provided in Blackboard

COURSE POLICIES

Assignments are due on time (5PM Central Time date due). Late assignments will be downgraded (5 points each day), and assignments more than one week late will receive a zero. If circumstances arise that do not allow you to complete your assignments by the specified dates, please contact me at least two days before the assignment's due date.

We are using Blackboard and other programs to deliver course content, collect assignments, and to interact with you online. Please be sure to configure your computer according to the directions within Blackboard. While unforeseen technology glitches can (and sometimes do) occur, please do not wait until the day the assignment is due to let us know you are having trouble using one of Blackboard's learning tools.

Please include your name in all of your assignment submissions. Also be sure that your submitted assignment text files are either saved as MS Word

(.doc or .docx) or as a Rich Text Formatted file (.rtf). PDF or other file formats will not be accepted!

CHEATING:

The University of Nebraska-Lincoln has a policy about academic dishonesty, as indicated in the Student Code of Conduct (see Undergraduate Bulletin). As a student at UNL, you enjoy rights and protections under the code and are obligated to conduct yourself in compliance with the code.

As the Student Code of Conduct indicates, academic sanctions for misconduct subject to appeal are at the discretion of the instructor, and may include giving the student a failing grade for the course. In this course, the least penalty that will be imposed for misconduct is a one letter grade reduction in the course grade, but in most instances the penalty for cheating will be a failing grade in the course.

EVALUATION

Module 1:

Pre- and Post-Test Evaluation	10 points
Entomology knowledge test-out quiz	10 points
Quizzes on Course Content Either Entomology or Teaching	30 points
Arthropod Lesson Search and Research Supports	30 points
Insect Pet reflections and exercises	30 points

Module 2: Classroom Instruction & Evaluation of Inquiry Lessons

Guided Inquiry Teaching 1	70 points
Arthropod Lesson Evaluation Exercise	70 points
Reflection Questions	10 points

Module 3: Development of Insect-Based Inquiry Lessons

Lesson Plan	150 points
Project on Entomology Teaching	150 points

Total	560 points
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Letter grades will be assigned based on straight percentages of 100 - 90% A range, 89 - 80% B ranges, etc.; however, we reserve the right to use a more

lenient scale if needed.

SCALE %Points Earned

100 - 98	A+	89-87	B+	79-77	C+	69-67	D+	59-Below	F
97 - 94	A	86-83	B	76-73	C	66-63	D		
93-90	A-	82-80	B-	72-70	C-	62-60	D-		

Key for Module 1 only

Red = Entomology Basics Path

Blue = Teaching Basics Path

Highlighted Shared Assignment

COURSE SCHEDULE

Date	Topic and Lecture Materials	Assignments Due
Aug 29	Course Overview -- Review Syllabus	<ul style="list-style-type: none"> • Six Noun Assignment • Pre-Evaluation • Test-Out Quiz • Update computer software/email
Sept 6	Top Ten Reasons to Study Insects	Reading pp. 3-8, pp. 131 - 153
Sept 6	Overview of Classification System	Reading pp. 21 - 31
Sept 12	Overview of Classification System Arthropod Classes	Reading pp. 9 - 13 Start Insect Pet Assignment
Sept 12	Ten Things to Know About Insects	Reading pp. 35- 49, pp. 99- 112
Sept 19	Orthopterans - grasshoppers, crickets, roaches, and mantids	Reading pp. 89 - 96 Quiz 1
Sept 19	Socializers: bees, ants, and termites	Reading pp. 77 -- 82, pp. 113 -- 119 Ent Standards Lesson
Sept 26	Socializers: bees, ants, and termites (cont.) Caterpillars and Beetles	Arthropod Lesson Search Reading pp. 53 - 57 Quiz 2 Insect Pet Assignment Due - Sept 26

Oct 3 - 31	<p>Science as Inquiry (cont.) Science as Inquiry (cont.)</p> <p>Module 2: Classroom Instruction & Evaluation of Inquiry Lessons Lecture 1 -- Oct. 3 Lecture 2 -- Oct 10. Project on Ent Teach. Lecture - Oct 17</p>	<p>Quiz 3 - Oct. 3 Active Learning Teaching Techniques Oct. 3</p> <p>Guided Inquiry Teaching Worksheet -- Oct.24 Arthropod Lesson Eval Exercise -- Oct 31</p> <p>Reflection Questions --</p>
Nov 7- Dec 5	<p>Module 3: Development of Insect-Based Inquiry Lessons Lecture -- Nov. 7</p>	<p>Lesson - Due Nov. 21</p> <p>Entomology Project - Due Dec. 5</p>
Dec 12	<p>Online Post-test Course Evaluation -</p>	<p>Post-Evaluation & Course Evaluation - Dec 12</p>