University of Nebraska–Lincoln

ENTOMOLOGY DEPARTMENT

EVOLUTION - INSECTS

SAMPLE COURSE SYLLABUS

(I) CLASS INFORMATION

Course Code: ENTO 896 Sect. 701
Credits: 3

(II) INSTRUCTOR INFORMATION

Dr. Helena Puche ♦ Email: hpuche2@unl.edu ♦ Prerequisites: None

(III) COURSE DESCRIPTION

Using many insects as examples, this course in evolution will give participants a chance to discuss and learn new ideas and information about current and foundational issues in evolution starting with Darwin's voyage of the Beagle and the Darwinian Natural Selection Theory. The course will cover the mechanisms of evolution, Mendelian genetics in populations, the genetics of homology and evo-devo, adaptations, speciation, sexual & king selection, and social behavior. We will also discuss the impact of evolution on conservation and society.

Goals

- Develop knowledge base for current and foundational issues in evolution
- Develop critical-thinking skills
- Relate concepts in evolution to your work environment

Learning about evolution needs to be part of the language used when you interact with natural phenomena trying to understand its intricate patterns. Participants not only will gain a better understanding of biology as a field of study, but also will gain a more holistic approach, expanding their understanding of evolution as it intersects with conservation and natural phenomena.

(IV) LEARNING RESOURCES & TEXT

1. Zimmer, C. (2014). The tangled Bank. an Introduction to Evolution. 2nd ed. Roberts and company. Colorado. Www.roberts-publishers.com
2. Freeman, S. & J.C. Herron. 2007. Evolutionary Analysis. 4th ed. Pearson Benjamin Cummings.
3. Grimaldi, D. and M.Engel. (2006).Evolution of the Insects. Cambridge Press.

(V)_COURSE CONTENTS

	DATES	TOPIC	LAB ACTIVITY
Week 1	AUG 25	Welcome - Read materials	QUIZ 1 Pre-assessment
Week 2	SEP01	Evolutionary Theory	Answer threads
Week 3	SEP 08	Darwinian Natural Selection	QUIZ 3 Answer threads & QUIZ
Week 4	SEP 15	Evidence of Evolution – PROJECT IDEA	QUIZ 4 Evol. Plug-In Cheddar man
Week 5	SEP 22	Mendelian genetics	QUIZ 5 Inheritance QUIZ
Week 6	SEP 29	Selection and Mutation as mechanisms of Evolution	QUIZ 6 selection-Mutation -HWE - Allele exercises
Week 7	OCT 06	Adaptations	QUIZ 7 Species construction
Week 8	OCT 13	Speciation	QUIZ 8 Answer threads
Week 9	OCT20	Fall Break	BREAK
Week 10	OCT 27	Sexual Selection	QUIZ 9 Answer threads
Week 11	NOV 03	Kin selection and Behavior	PROJECT DRAFT DUE
Week 12	NOV 10	Reconstructing Evolutionary trees	QUIZ 10 Evolutionary trees
Week 13	NOV 17	Development and Evolution	QUIZ 11 Answer threads
Week 14	NOV 24	Evolution and Conservation	QUIZ 12 Answer threads
Week 15	DEC 01	Evolution and Society	QUIZ 13 Answer threads
Week 16	DEC 08	Final Project Presentations	QUIZ 14 Post-assessment

(VI)_GRADING

Weekly participation	40%
Quizzes	30%
Final project	30%
Total	100%

A+	= 98-100%	B+	= 88-89%	C+	= 78-79%
A	= 93-97%	B	= 83-87%	C	= 73-77%
A -	= 90-92%	B -	= 80-82%	C -	= 70-72%

A. Weekly Participation: Actively participate as requested, three posts minimum per week per thread. Usually, there are two threads each week with at least 6 total posts required.

B. Lab reports: Classes will include lab activities and a short lab report will be required as needed.

C. Quizzes: periodical open book quizzes will be administered to evaluate course contents.

D. Final Project:.

Specifications for Final project report:

- ♦Format. 1" margins and 10-12 Times New Roman Font
- ♦Sections. First, Last name, State/Country, page numbers
- ♦Other. A good Title, Abstract/Summary, Specific Project sections,
- ♦Reflections/Improvement/Next Steps/Future Research
- ♦References 2 minimum.
- ♦Appendix (if needed for figures, survey tools, images, photos, other)
- ♦File Name. LAST NAME Final Project.doc (ex. MCDONALD_Final_Project.doc)

(VII) EXPECTATIONS

♦ Participate actively, constructively, and politely in class.

♦ Submit all assignments by the time and date indicated.

♦ Notify the instructor as soon as possible if you have an emergency and you need more time for an assignment (Late assignments under this circumstances with prior consent of the instructor could be granted up to 2 weeks to submit the appropriate material with no penalties)

(VIII) **Measurable Student Learning Outcomes**

1. Students should be able to remember, define and describe key biological terminologies with respect to key concepts and principles.
4. Students should be able to develop the understanding of biological principles in written form.

(IX) **Active Pursuit:**

The criteria for active pursuit will include:

1. Completing at least 70% of the lab activities and report writing.
2. Taking 70% of exams and quizzes with a passing grade.

(X) Other information

Academic Integrity:

The UNL has no tolerance for violations of academic integrity. The student policy manual states, "Plagiarism and cheating of any kind are serious violations of these standards and will result, minimally, in the grade of 'F' by the instructor". All course work will be checked for Academic Integrity. In this course, the first violation will result in an "F" for the assignment; the second violation will result in course failure. Make-ups and revisions are not available after an infraction of academic integrity.

(XI) Netiquette

In an online classroom, the primary means of communication is written. The written language has many advantages: more opportunity for reasoned thought, more ability to go in-depth, and more time to think through an issue before posting a comment. However, written communication also has certain disadvantages, such a lack of the face-to-face signaling that occurs through body language, intonation, pausing, facial expressions, and gestures. As a result, please be aware of the possibility of miscommunication and compose your comments in a positive, supportive, and constructive manner.

Follow course netiquette and common Internet decorum when interacting with colleagues and instructors. "Write, read, think before you post, and re-think again what you post before you post." Ask yourself- 'would I stand up in a lecture room and make this statement face-to-face?" Also, check your tone--capitalizing words and exclamation points are the equivalent to shouting in an online environment, so be conscious about this.