

Southeast Missouri State University

Department of Biology

Z0 430/630

Invertebrate Zoology

New Spring 2010

I. Catalog Description and Credit Hours of Course:

Invertebrate biology, diversity, phylogeny, structure, life history, development, and additional selected topics in invertebrate zoology. Studio style course. (4)

II. Prerequisite: ZO 200 or permission of instructor

III. Purposes or Objectives of the Course:

- A. Provide a background in invertebrate biology including structure, function and physiology.
- B. Provide an understanding of invertebrate taxonomic and morphological diversity.
- C. Provide the ability to identify invertebrates at several taxonomic levels.
- D. Provide an understanding of invertebrate life history and development.
- E. Provide students practical experience in working with invertebrates.
- F. Provide an understanding of positive and negative human and invertebrate interactions, including parasites and invasive species

IV. Expectations of students:

- A. To attend all class sessions.
- B. To actively participate in all discussions, activities, and field trips.
- C. To take all exams and final.
- D. To make a taxonomic key.
- E. To do a poster presentation.
- F. Graduate students will additionally do an independent research paper.

V. Course content or outline:

Topic	Themes	Class Hours
Introduction		1
Porifera (Cell types)	Introduction to cell specialization	3
Mesozoa		2
Ctenophora	Specialization in cells, tissues, and individuals	2
Cnidaria		6
Platyhelminthes	Complex lifecycles	7
Complex Life cycles	Origin of complex lifecycles	2
Bryozoa, Entoprocta, Cycliophora &	Convergent evolution	3
Gnathifera	Divergent evolution	2
Nemertea and Gastrotricha	The development and adaptive radiation	2
Annelids, Sipuncula		7
Mollusca	of Spirilia	11
Brachiopods, Phornida		4
Larvae Comparisons		2
Ecdysis and cuticles		1
Kinorhyncha, Priapula, & Loricifera	Exoskeleton form and function	2
Nematoda		6
Nematomorpha		2
Panarthropoda		12
Cheatognatha, Hemichordata	Tripart body plans	3
Echinodermata		5
Chordata		3
Poster Presentation		2
<u>Total</u>		<u>90</u>

VI. Textbook:

Brusca R. C., G. J. Brusca, and N. J. Haver, 2003 *Invertebrates*. Sinauer Associates.

Recent papers from the literature will also be used in addition to the text.

VII. Basis of Student Evaluation:

For Undergraduate Students:

Poster	20%
Take-home Exams	35%
Student Key	45%

For Graduate Students:

Poster	16%
Take-home Exams	30%
Student Key	30%
Individual Student Project	24%

The weight of the evaluation criteria may vary according to instructor and will be communicated at the beginning of the course.

VIII. Grading Scale

Undergraduate

90% -100% = A

80% - 89% = B

70% - 79% = C

60% - 69% = D

<60% = F

Graduate

90% -100% = A

80% - 89% = B

70% - 79% = C

<70% = F

The grading scale may vary according to each instructor and will be communicated at the beginning of the course.

IX. Academic Policy Statement:

Students will be expected to abide by the University Policy for Academic Honesty regarding plagiarism and academic honesty. Refer to:<http://www6.semo.edu/judaffairs/code.html>

X. Student with Disabilities Statement:

If a student has a special need addressed by the Americans with Disabilities Act (ADA) and requires materials in an alternative format, please notify the instructor at the beginning of the course. Reasonable efforts will be made to accommodate special needs.