

NEW COURSE PROPOSAL

PROGRAM AREA BIOLOGY

- 1. Catalog Description of the Course.** *[Include the course prefix, number, full title, and units. Provide a course narrative including prerequisites and corequisites. If any of the following apply, include in the description: Repeatability (May be repeated to a maximum of ___ units); time distribution (Lecture ___ hours, laboratory ___ hours); non-traditional grading system (Graded CR/NC, ABC/NC). Follow accepted catalog format.]*

BIOL 317 PARASITOLOGY (4)

Three hours of lecture and three hours of laboratory per week.

Prerequisites: BIOL 200

This course surveys the diversity of parasitic animals and protists. The parasitic life mode is found in a broad range of animal and protistan phyla, as well as some plant groups. Parasite-host relationships are often tightly co-evolved. Parasites have remarkable and complex adaptations to allow survival and successful reproduction and dispersal. Topics examined will include evolution and life histories of representative parasites, along with medical and epidemiological factors of those that affect humans or domestic animals. A lab fee is required.

2. Mode of Instruction.

	Units	Hours per Unit	Benchmark Enrollment
Lecture	<u>3</u>	<u>1</u>	<u>20</u>
Seminar	<u> </u>	<u> </u>	<u> </u>
Laboratory	<u>1</u>	<u>3</u>	<u>20</u>
Activity	<u> </u>	<u> </u>	<u> </u>

- 3. Justification and Learning Objectives for the Course.** (Indicate whether required or elective, and whether it meets University Writing, and/or Language requirements) *[Use as much space as necessary]*

This will be an elective course for Biology majors.

Parasites come from a broad range of animal and protistan groups. A survey of their biology and evolution allows students to sharpen and broaden their biological knowledge while studying some remarkable, animals, their relationships and life histories. Nearly all free-living plants and animals are affected by parasites or one type or another. Humans are host to numerous parastic infections. Examination of medical, epidemiological and historical aspects of human parasites allows exploration of health related and applied topics.

Learning Objectives

Students who successfully complete this course will be able to:

- explain basics of the parastic life-mode in context of ecological and evolutionary forces.
- apply basic physiological, evolutionary and ecological concepts to parastic relationships.
- identify major parastic groups, and describe their key characteristics.
- describe the impact of parastic infections on human health and history.
- explain medical and public health aspects of human parastic infections.

4. Is this a General Education Course YES NO

If Yes, indicate GE category:

A (English Language, Communication, Critical Thinking)	
B (Life Sciences)	
C (Fine Arts, Literature, Languages & Cultures)	
D (Social Perspectives)	
E (Human Psychological and Physiological Perspectives)	

5. Course Content in Outline Form. *[Be as brief as possible, but use as much space as necessary]*

1. Introduction to scientific method, including the sciences of zoological classification and phylogenetics.
2. Basic ecological and evolutionary principles.
3. Survey of the phyla that include parasitic organisms, highlighting evolutionary and ecological relationships.
4. Medical and epidemiological issues regarding parasites that infect humans and domestic animals.

6. References. *[Provide 3 - 5 references on which this course is based and/or support it.]*

Dailey, M. 1995. *Essentials of Parasitology Laboratory Manual, 6th Edition*. McGraw-Hill.
Matthews, BE. 1998. *An Introduction to Parasitology*. Cambridge University Press.
Cox, FEG. 1993. *Modern Parasitology: A Textbook of Parasitology, 2nd edition*. Blackwell Science Inc.
Bogitsh, B and Cheng, T. 1998. *Human Parasitology, 2nd edition*. Academic Press.

7. List Faculty Qualified to Teach This Course.

Biology faculty

8. Frequency.

a. Projected semesters to be offered: Fall x Spring Summer

9. New Resources Required.

- a. Computer (data processing), audio visual, broadcasting needs, other equipment
- b. Library needs
- c. Facility/space needs

Equipped Biology lab, Collection of representative microscope slides and preserved specimens.

10. Consultation.

Attach consultation sheet from all program areas, Library, and others (if necessary)

11. If this new course will alter any degree, credential, certificate, or minor in your program, attach a program modification.

 Ching-Hua Wang 5 Dec 03

Proposer of Course

Date