Department: Environmental Conservation and Horticulture

Date: January 31, 2012

I. Course Prefix and Number: BIO 280
   Course Name: Entomology
   Credit and Contact Hours: 3 credit hours and 4 contact hours

   Catalog Description Including Pre- and Co-Requisites:
   This course investigates insect structure and function, ecology, behavior, and life histories of economically environmentally important insects. The relationship between these topics and biological chemical control will be discussed. Insect identification and insect sampling methods are emphasized.
   Prerequisites: BIO 121

II. Course Outcomes and Objectives:

Student Learning Outcomes:
Students will:
   ● Demonstrate knowledge of the relationships between insects and the totality of the physical and biological factors affecting them or influenced by them (professional competency).
   ● Demonstrate knowledge of human impact on insect populations (global concerns).
   ● Integrate information from multiple sources (reading, writing, information resources, computer literacy, critical thinking).
   ● Create and revise college-level written materials (writing).
   ● Identify insects to the family level (professional competency).

Relationship to Academic Programs and Curriculum:
Entomology (BIO 280) is a requirement for students in the A.A.S. Environmental Horticulture degree program and serves as a 3-credit science or general elective for other programs.

College Learning Outcomes Addressed by the Course:
   X writing
   _ oral communications
   X reading
   _ mathematics
   X critical thinking
   X computer literacy
   _ ethics/values
   _citizenship
   X information resources
   X global concerns

III. Instructional Materials and Methods:

Types of Course Materials:
Students will use text books, field guides, informational leaflets and bulletins, as well as internet resources.

**Methods of Instruction (e.g. Lecture, Labs, Seminars ...):**
Instruction will include: lecture, field experiences, and laboratory.

**IV. Assessment Measures (Summarize how the student learning outcomes will be assessed):**
- Understanding of course content will be assessed using written examinations and written assignments.
- Writing, reading, computer literacy, critical thinking and information gathering competencies will be assessed and through a series of writing assignments.
- Global concerns competency will be assessed using specific questions on examinations.
- Professional competency in insect identification will be assessed through laboratory practical examinations and an insect collection.

**V. General Outline of Topics Covered:**
- Classification of insects
- Insect development
- Insect external anatomy
- Insect population dynamics and management
- Economically important insects
- Identification of insects and visual recognition of damage caused by insects
- Insect communication and plant defenses