**BIO 273 Entomology** MW 12:00-1:50pm, Block (OC) 306

****This syllabus subject to change****

**Dr. Laurie Henneman : Office hours: MWF 10-11 am (or by appt.), Block (OC) 211, 683-7263**

Email and course web site: http://www.umwestern.edu/webct.htm (click "webCT" button on Western homepage)

**Required Texts:** "Fundamentals of Entomology", 6th ed., R.J. Elzinga;
Peterson Field Guides: "Insects", by Borrer/White

**Prerequesite:** Competency in basic/introductory biology

**Course Objectives:**

This course provides an overview of the fundamental principles of entomology, including diversity, taxonomy, evolution, physiology, ecology, and behavior. Laboratory and field exercises will comprise the bulk of course time, supplemented as needed by lecture, and provide direct experience with insect collection, curation, identification, and experimentation techniques. Communication skills will be emphasized through written assignments (i.e., tests, projects, reports) and oral presentations. Occasional assigned readings will also provide a social and historical context for discussion.

**Course Outcomes:**

Upon completion of the course, students will be able to:

- identify and describe major insect orders
- properly collect and curate insect specimens
- summarize basic principles of insect ecology, evolution, and behavior
- design and conduct experiments using living insects

**Student Responsibilities:**

Students are expected to participate in all class meetings and laboratory/field trip sessions and to make up any class work missed when absent. Tests must be taken at the scheduled time unless the student makes an alternate arrangement with the instructor well in advance of the planned absence (or arranged as soon as possible by phone in case of an unplanned absence, such as an illness.) Students with unexcused absences will not be allowed to make up tests. Students are encouraged to make an appointment to meet with the instructor to talk about any special needs or problems as soon as possible or they arise.

| **Course Requirements and Grading** | % of the grade | Grading |
|---|---|---|
| 2 midterm written/practical exams | 10% (5% each) | 90-100%=A |
| Final exam | 15% | 80-89%= B |
| Insect collection | 25% | 70-79%= C |
| Oral presentation | 5% | 60-69%= D |
| 3 short projects | 15% (5% each) | <60%= F |
| Final project (written) | 15% | |
| Participation | 15% | |
| TOTAL | 100% | |

| DATE | | TOPIC |
|---|---|---|
| M | Aug 30 | Overview of the course and introduction to collection |
| W | Sept 1 | Collecting techniques (field) |
| M | Sept 6 | Labor Day Holiday - no classes |
| T | Sept 7 | **Blacklighting** - Poindexter Slough,8:30 pm |
| W | Sept 8 | Insect curation (lab); **Blacklighting**, Beaverhead Rock 8:30pm |
| M | Sept 13 | Pollination (field) |
| W | Sept 15 | Social insects - collect ants (field) |
| M | Sept 20 | Social insects - bees (field trip to Beaverhead Honey) |
| W | Sept 22 | Aquatic insects, river and pond (field) |
| M | Sept 27 | Aquatic adaptations (lab); **Project 1 (observation) due** |
| W | Sept 29 | Modes of herbivory (field) |
| M | Oct 4 | Ant foraging (field) |
| W | Oct 6 | Beetles (field) |
| M | Oct 11 | Detritivores (field); **Project 2 (herbivory) due** |
| W | Oct 13 | Forensic entomology (lab) |
| M | Oct 18 | Review/discussion; **final project outline due** |
| W | Oct 20 | **Midterm I**; bring in individual collection to work on |
| M | Oct 25 | Ethograms of ants (lab) |
| W | Oct 27 | Ant maze experiment (lab) |
| M | Nov 1 | *Drosophila* behavior; **Project 3 (ethogram) due** |
| W | Nov 3 | Parasitoid learning (lab) |
| M | Nov 8 | Dissection - grasshoppers |
| W | Nov 10 | Dissection - *Drosophila* salivary glands, abdomens |
| M | Nov 15 | **Midterm II** |
| W | Nov 17 | Development in *Drosophila* (Dr. Dyreson) |
| M | Nov 29 | Dissections - Leptidoptera and Hymenoptera |
| W | Dec 1 | Insect taxonomy; **final project due** |
| M | Dec 6 | Insect taxonomy |
| W | Dec 8 | Insect taxonomy |
| M | Dec 13 | Presentations and review; **insect collections due** |
| W | Dec 15 | **Final Exam** @ 12:00 pm (practical) |