

General Entomology (BIO 431) SP 2008
Course Explanation and Syllabus



GENERAL INFORMATION:

INSTRUCTOR:

Dr. Sibyl Bucheli (bucheli@shsu.edu)
Office: Lee Drain Building, room 142
Phone: 4-1550
Office Hours: Wednesday 2-5 pm or by appointment

CLASS SCHEDULE:

LDB, room 136
Lecture: Mon, Wed, Fri 9:00 am – 9:50 am
Lab: Mon 1:00 pm – 2:50 pm

I TAKE ACADEMIC HONESTY VERY SERIOUSLY and will pursue any violations. All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The university and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

COURSE DESCRIPTION:

1. A study is made of insect morphology, taxonomy, development, and life histories. Collection and identification by use of keys are stressed.
2. Prerequisite: Minimum grade of C in BIO 161/111, 162/112. Junior standing.
3. Two-hour laboratory dealing primarily with identification and curation of insects.

COURSE OBJECTIVES:

By the end of this course, you should be able to:

1. **Explain** the importance of insects as members of ecosystems.
2. **Gain** an appreciation of insect biology, diversity and ecology.
3. **Describe** the basic anatomy, morphology, taxonomy, development, life histories and key characteristics of different insect groups.
4. **Identify** common orders and families of insects.
5. **Demonstrate** the ability to properly collect and curate insects.

COURSE STRUCTURE:

1. **Lecture** will cover the basics of entomology (basic anatomy, morphology, taxonomy, development, life histories).
2. **Attendance** to both lecture and laboratory are mandatory. I will cover information that is not in your book that you will be responsible for knowing.
3. **Laboratory** will provide you with hands on experience of insect form, function and diversity.
4. An **Insect Collection** will provide you with a practical understanding of insect behavior, ecology and proper curatorial techniques. The **Preliminary Collection** will help me evaluate your progress.
5. **Lecture Exams** and **Homework** and **Laboratory Exam** and **Quizzes** will provide you with a gauge of your progress.
6. **Reading** the assigned chapters and all handouts is necessary for the class.
7. **Blackboard** provides 24/7 access to lecture notes in outline form (it would not hurt to print these out so they are handy for note-taking in lecture and lab).

COURSE RESOURCES:

Required Texts:

TITLE A field guide to insects: America north of Mexico (PEG)
AUTHOR Borror, Donald Joyce and Richard E. White

TITLE The Insects: An Outline of Entomology
AUTHOR Gullan, P. J. and P. S. Cranston

Lecture handouts: Lecture notes and other resources are available electronically via Blackboard or as a handout in class.

EVALUATION METHODS: There will be four lecture exams, four homework assignments, two lab exams, two lab quizzes, and an insect collection required for this course. Details follow.

GRADING:

	Number	Weight	Points
Lecture Exams	3	50% total	300 (100 points each)
Lecture Homework (TBA)	4	5% total	40 (10 points each)
Lab Exams	2	20% total	160 (130 points each)
Lab Quizzes (open book)	4	5% total	40 (10 points each)
Preliminary Collection	1	5% total	40
Final Collection	1	15% total	120
		700 total	

- Lecture Exams:** There are a total of 3 lecture exams including the final exam. All exams are comprehensive in that you must understand and be able to build on concepts presented in previous lectures. The final exam will cover new material presented since Exam 2 and will be of similar format. The format for all exams will consist of matching, true/false, labeling diagrams, fill in the blank, short answer, and essay questions. All essay questions will be graded based on comprehension of the question and articulation of the answer, and must be answered in complete sentences. Spelling will count on all answers. Make-up exams will only be given for excused absences (Doctor's excuse, obituary, etc.) deemed valid at my discretion. I am under no obligation to provide the student with the opportunity to make-up exams due to unexcused absences. Make-up exams will not be the same exam given to the rest of the class.
- Lecture Homework:** There will be a total of four homework assignments throughout the semester. Each assignment will be in the form of a short essay. They are worth 10 points each and will be graded based on comprehension of the question and articulation of the answer. It must be typed or written neatly, and must be answered in complete sentences. If I cannot understand your answer for any reason, points will be deducted even if you believe it is correct. **These will be unannounced assignments (not announced in the schedule) and given at the end of the class lecture. They are due at the beginning of the next class period. I will not accept late homework or homework turned in via e mail. There will be NO MAKE-UPS for missed homework assignments. These homework assignments WILL NOT be posted on Blackboard. You must be in class to get the assignment and you must be in class to turn in the assignment.**
- Lab Exams:** There will be two lab exams given. These exams will be in practical form where you will be asked to identify structures and specimens. You are not allowed to touch the specimen or the microscope (except for the fine tuning dial). These exams will consist of you writing a correct answer on an answer sheet. The answers will come from your memory and will not be multiple choice or matching (no word bank will be provided). There will also be short answer and short essay questions on the lab exams. Spelling will count. If I cannot understand your answer for any reason, points will be deducted even if you believe it is correct. These exams will be cumulative. **There will be NO MAKE-UP exams given. Under the event of an excused absence, you will be required to turn in an alternate assignment deemed appropriate by me, the instructor.**

4. **Lab Quizzes:** There will be a total of four lab quizzes throughout the semester. Each quiz will be in practical form where you will be asked to identify specimens. They are worth 10 points each. Spelling will count. If I cannot understand your answer for any reason, points will be deducted even if you believe it is correct. These quizzes will be in practical form where you will be asked to identify specimens. You are not allowed to touch the specimen or the microscope (except for the fine tuning dial). You must correctly identify insects to the level of family. Unlike the exams, lab quizzes will be open book – you are only allowed to use “A field guide to insects: America north of Mexico” to help ID the specimens. You are permitted to write whatever you want in your field guide but you **ONLY** permitted to use that guide during the quiz. **There will be NO MAKE-UP quizzes given, even upon presentation of a valid excuse. If you miss the quiz, you will receive zero credit for that quiz.**

5. **Insect Collection:** THIS IS THE FUN PART!! You are required to present a preliminary insect collection mid-semester and a properly curated insect collection at the end of the semester. There will be no exceptions to this requirement. Since you live in Texas and it is warm here all the time, you should be able to make a lovely insect collection. Materials necessary to make this collection will be provided on loan from the Department of Biology at SHSU to you for the duration of this class. There will be a loan form made available to you at your first lab session. You will be required to turn in your equipment at the end of the semester along with your collection. **Failure to do so will result in subtraction of 10 points per lost item.** We will review in detail the requirements of the collections during the first lab session. Detailed handouts outlining my expectations will be made available to you via handouts in lab and on blackboard and will be thoroughly explained at the time of their distribution.

6. **There will be NO extra credit.**

Tentative Class (Lecture and Laboratory) Schedule: (Subject to change based on lecture and class progression)

Week 1	Wednesday (Jan 16) Friday (Jan 18)	Syllabus; Introduction Introduction Continued
Week 2	Monday (Jan 21) LAB: Wednesday (Jan 23) Friday (Jan 25)	No Class (MLK Day) No Lab (MLK Day) Arthropod Evolution and Arthropod Systematics Insect Evolution and Systematics I: Origins, Processes
Week 3	Monday (Jan 28) LAB: Wednesday (Jan 30) Friday (Feb 1)	Insect Evolution and Systematics II: Overview Part I: Entognatha, Hemimetabola Insect Collection Techniques and Insect Curation Basics Insect Evolution and Systematics II: Overview Part I: Entognatha, Hemimetabola; continued Insect Evolution and Systematics III: Overview Part II: Holometabola
Week 4	Monday (Feb 4) LAB: Wednesday (Feb 6) Friday (Feb 8)	Insect Evolution and Systematics III: Overview Part II: Holometabola; continued Arthropoda and Insect Orders External Anatomy I: The Integument and Cuticular Structures External Anatomy II: The Head and Modifications
Week 5	Monday (Feb 11) LAB: Wednesday (Feb 13) Friday (Feb 15)	External Anatomy III: The Thorax and Modifications External Anatomy of a Grasshopper; Internal Anatomy of a Cockroach External Anatomy IV: Abdomen and Modifications LECTURE EXAM I
Week 6	Monday (Feb 18) LAB: Wednesday (Feb 20) Friday (Feb 22)	Internal Systems I: Digestion and Excretion I QUIZ 1; Insect Behavior Internal Systems I: Digestion and Excretion II Internal Systems II: Circulation and Respiration

Week 7	Monday (Feb 25) LAB: Wednesday (Feb 27) Friday (Feb 29)	Internal Systems III: Muscles and Locomotion I Lab Exam I Internal Systems III: Muscles and Locomotion II Internal Systems IV: Sensory Systems
Week 8	Monday (Mar 3) LAB: Wednesday (Mar 5) Friday (Mar 7)	Growth and Molting I: Courtship and Copulation Field Trip <u>REQUIRED</u> Growth and Molting II: Reproductive Systems Growth and Molting III: Insect Development and Life Histories
Week 9	SPRING BREAK	
Week 10	Monday (Mar 17) LAB: Wednesday (Mar 18) Friday (Mar 21)	Hormones, Pheromones and Allomones Preliminary Collection Due; Identification of Hemimetabola General Insect Behavior No Class (Good Friday)
Week 11	Monday (Mar 24) LAB: Wednesday (Mar 26) Friday (Mar 28)	Insect Ecology I Quiz 2; Identification of Coleoptera and Lepidoptera Insect Ecology II Insect Phylogenetics and Evolution I
Week 12	Monday (Mar 31) LAB: Wednesday (Apr 2) Friday (Apr 4)	Insect Phylogenetics and Evolution II Identification of Coleoptera and Lepidoptera, continued. Ground-Dwelling Insects LECTURE EXAM II
Week 13	Monday (Apr 7) LAB: Wednesday (Apr 9) Friday (Apr 11)	Aquatic Insects I Quiz 3; Identification of Diptera and Hymenoptera Aquatic Insects II Insects and Plants I
Week 14	Monday (Apr 14) LAB: Wednesday (Apr 16) Friday (Apr 18)	Insects and Plants II Identification of Diptera and Hymenoptera, continued. Insect Societies I: Termites Insect Societies II: Ants
Week 15	Monday (Apr 21) LAB: Wednesday (Apr 23) Friday (Apr 25)	Insect Societies III: Bees Quiz 4; Insect Collection Curation Insect Predation Insect Parasitism
Week 16	Monday (Apr 28) LAB: Wednesday (Apr 30) Friday (May 2)	Insect Defense Review; Insect Collections Due Medical and Veterinary Medicine Forensic Entomology
Week 17	Monday (May 5) LAB: Wednesday (May 7)	Pest Management I Lab Exam II Pest Management II
Week 18	Wednesday (May 14)	Final Exam, 8:00 – 10:00 am

READ THE FINE PRINT

SPRING SEMESTER 2008

January 16	WEDNESDAY. Daytime on-campus classes begin. Late Registration . Process class schedule changes. Refer to the Schedule of Classes for details and deadlines. Wednesday Night (WN) classes begin (on-campus and off-campus).
January 21	MONDAY. University Holiday - Martin Luther King Day.
January 24	THURSDAY. Last day to register and to process schedule changes. Thursday Night (ThN) classes begin (on-campus and off-campus).
February 1	FRIDAY. Twelfth Class Day. Last day to drop without a "Q" and receive 100% refund. Degree Applications to be filed in Registrar's Office by students graduating May 2008.
March 7	FRIDAY. Half-semester courses end. Last day to drop a half-semester course for the Spring Semester without grade of F. Degree applications to be filed in Registrar's Office by students graduating in August 2008.
March 7	FRIDAY. Residence halls close at 6 p.m. for spring recess.
March 10,11, 12, 13, 14	MONDAY THROUGH FRIDAY. Spring recess for students and faculty.
March 16	SUNDAY. Residence halls open at 2:00 p.m.
March 17	MONDAY. Classes resume at 8:00 a.m.
March 21	FRIDAY. Good Friday. Holiday for Students and Faculty.
April 14	MONDAY. Deadline for submission of theses and dissertations.
May 8	THURSDAY. Last Class Day. Last day to resign. Last day to drop a course without the grade of F.
May 9	FRIDAY. Final Exam Study Day.
May 10, 11, 12,13, 14, 15	SATURDAY, SUNDAY, MONDAY, TUESDAY, WEDNESDAY, THURSDAY. Final examinations [includes Monday Night (MN), Tuesday Night (TuN), Wednesday Night (WN) and Thursday Night (THN) final examinations].
May 17	SATURDAY. TENTATIVE. Commencement, Bernard G. Johnson Coliseum.
May 19	MONDAY. 9:00 a.m. Deadline for filing grades with the Registrar's Office. Spring Semester ends.

SAM POLICY www.shsu.edu/syllabus/ for additional documentation.

Academic Honesty: All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The university and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

Visitors in the classroom: Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance. Students wishing to audit a class must apply to do so through the Registrar's Office.

Students with Disabilities: It is the policy of the university that no otherwise qualified disabled student shall, solely by reason of his/her handicap, be excluded from participation in, or denied benefits of, or be subject to discrimination under any academic or Student Life program or activity. Disabled students may request help with academically related problems stemming from individual disabilities by contacting their instructor, school/department chair, or by contacting the university Chair of the Committee for Continuing Assistance for Disabled Students/ Director of Counseling Center (located in Lee Drain Annex, phone 936-294-1720). A student with a disability is encouraged to register with the university Counseling Center, as well as contacting their instructor about assistance needs. Accommodation cannot be made until the student has initiated the request with the Counseling Center. Every semester that the student desires accommodations, it is the student's responsibility to complete a Classroom Accommodation Request Form at the Counseling Center and follow the stated procedure in notifying faculty. Accommodations for disabled students are decided upon documentation and need on a case-by-case basis by the Counseling Center. All requests are handled with confidentiality according to university procedures.

Religious Holy Days Policy: Section 51.911(b) of the Texas Education Code requires that the university excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. University Policy 861001 provides procedures to be followed by the student and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). This request must be made in the first 15 days of the semester or the first 7 days of a summer session in which the absence(s) will occur. The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

Class Attendance

<http://www.shsu.edu/catalog/scholasticrequirements.html>

1. Regular and punctual class attendance is expected of each student at Sam Houston State University.
2. Each faculty member will keep a record of student attendance.
3. Each faculty member will announce the policies for accepting late work or providing makeup examinations. Students are expected to show appropriate cause for missing or delaying major assignments or examinations.
4. A student shall not be penalized for three or fewer hours of absences when examinations or other assigned class work has not been missed; however, at the discretion of the instructor, a student may be penalized for more than three hours of absences.
5. Each instructor is obligated to clarify in writing to each student enrolled in class at the beginning of the semester or summer session the instructor's classroom policy regarding absences.
6. Class absences will be recorded and counted only from the actual day of enrollment for the individual student in that specific class.