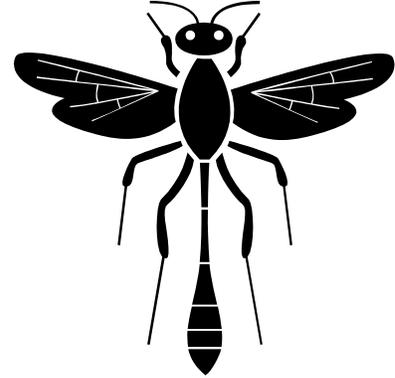


**BIOL 4410 General Entomology  
Class Syllabus and Course Explanation  
Undergraduate Spring 2013**

**GENERAL INFORMATION:**

**INSTRUCTOR:**

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



**CLASS SCHEDULE:**

LDB, room 130  
Lecture: Mon, Wed, Fri 11:00 am – 11:50 am  
Lab: Mon 2:00 pm – 3:50 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:** A study is made of insect morphology, taxonomy, development, and life histories. Collection and identification by use of keys are stressed. Prerequisite: Minimum grade of C in BIO 161/111, 162/112. Junior standing. 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.

**PREPARATION AND EXPECTATIONS:** You are expected to attend all lecture and laboratory sessions and I will take your attendance into consideration when considering grades. Entomology is an advanced course where good attendance is essential for success in meeting the basic requirements in the course. I will periodically provide you with reading from the literature. All material in the textbook chapters as well as additional reading assignments are fair game for exams.

**MAKE UP POLICY:** Make-up exams will only be given for excused absences (Doctor's excuse, obituary, etc.) deemed valid at my discretion. Make-up exams will not be given without written notification **prior to the exam** by the student and approval from the instructor. 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.

**COURSE RESOURCES:**

**Important Note:**

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Required Texts:

TITLE	A field guide to insects: America north of Mexico (PEG)
AUTHOR	Donald Joyce Borror and Richard E. White
TITLE	Entomology: Daly and Doyen's Introduction to Insect Biology and Diversity
AUTHOR	James B. Whitfield and Alexander H. Purcell III
TITLE	Lab Manual on Blackboard
AUTHOR	Bucheli
Additional Media:	Blackboard

**UNDERGRADUATE EVALUATION METHODS:** I reserve the right to assign additional work as necessary. I will calculate your grade to the nearest tenth of a point (00.00%). That means if you earned 79.59%, you earned a C, not B and if you earned a 79.99%, you earned a C, not B. You can track your score throughout the semester by checking your scores on Black Board. Adding up your total score and dividing it by the total possible (at that point) will give you're your percentage grade. A note about "curving": the instructor reserves the right to curve the grading scale downward just as they do to curve upward.

**GRADING:** A = 90.00%&above; B =80.00-89.00%; C =70.00-79.00%; D =60.00-69.00%;  
F =59.00%&below

**Evaluation:**

3 Lecture Exams @100 pts	300 pts
4 lecture homeworks @25	100 pts
7 Lab Quizzes (open book)@10 pts each, lowest dropped	60 pts
Laboratory Midterm	100 pts
Laboratory Final	100 pts
1 Preliminary Collection	50 pts
1 Final Collection	150 pts
<b>Total</b>	<b>860</b>

1. **Lecture Exams/Final:** There will be three exams during the semester (100 points each). The third will occur during your scheduled final time. Exams will assess your understanding of the factual material as well as your ability to understand meaning and context and to synthesize information from more than one lecture. Exams will typically (but not always) consist of definitions and concepts, short answer and two major essays. Please note, you will only have the regularly scheduled class time to complete exams.
  
2. **LECTURE HOMEWORKS:** 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 25 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 and they 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.**

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3. **Lab Quizzes:** There will be a total of seven 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. The lowest score will be dropped. Spelling will count. If I cannot understand your answer for any reason, points will be deducted even if you believe it is correct. You are not allowed to touch the specimen or the microscope (except for the fine tuning dial). Except for the first and second quizzes (over Collection & Curation and Insect Orders), 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.**
  
4. **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. These exams 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 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.**
  
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 and will be thoroughly explained at the time of their distribution.

**Penalty for late materials will 10% per day (the days start/stop at midnight).**

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

WEEK	DAY	LECTURE TOPIC	LAB ACTIVITY/TOPIC
Week 1	Wednesday	Syllabus; Introduction	
	Friday	Introduction Continued	
Week 2	Wednesday	Arthropod Evolution and Arthropod Systematics I	
	Friday	Insect Evolution and Systematics I: Origins, Processes	
Week 3	Monday	Insect Evolution and Systematics II: Overview Part I: Entognatha, Hemimetabola	Collection and Curation; Pinning
	Wednesday	Insect Evolution and Systematics II: Overview Part I: Hemimetabola; continued	
	Friday	Insect Evolution and Systematics III: Overview Part II: Holometabola	
Week 4	Monday	Insect Evolution and Systematics III: Overview Part II: Holometabola; continued	<b>QUIZ 1;</b> Modifications: legs, wings, antennae, mouthparts
	Wednesday	External Anatomy I: The Integument and Cuticular Structures	
	Friday	External Anatomy II: The Head and Modifications	
Week 5	Monday	<b>LECTURE EXAM I</b>	External Anatomy of a Grasshopper; Internal Anatomy of a Cockroach
	Wednesday	External Anatomy III: The Thorax and Modification	
	Friday	External Anatomy IV: Abdomen and Modifications	
Week 6	Monday	Internal Systems I: Digestion and Excretion I	<b>Quiz 2;</b> Insect Orders
	Wednesday	Internal Systems I: Digestion and Excretion II	
	Friday	Internal Systems II: Circulation and Respiration	
Week 7	Monday	Internal Systems III: Muscles and Locomotion I	Field Trip to SHSU CBFS <u>REQUIRED</u> ; transportation provided
	Wednesday	Internal Systems III: Muscles and Locomotion II	
	Friday	Internal Systems IV: Sensory Systems	
Week 8	Monday	No Lecture	<b>Midterm Exam</b>
	Wednesday	Growth and Molting II: Courtship	

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		and Copulation and Reproductive Systems	
	Friday	Growth and Molting II: Insect Development and Life Histories	
Week 9	<b>SPRING BREAK</b>		
Week 10	Monday	Hormones, Pheromones and Allomones	<b>Preliminary Collection Due; Identification of Hemimetabola</b>
	Wednesday	General Insect Behavior	
	Friday	Insect Ecology I	
Week 11	Monday	<b>LECTURE EXAM II</b>	<b>Quiz 3; Identification of Coleoptera</b>
	Wednesday	Insect Phylogenetics and Evolution I	
	Friday	Insect Phylogenetics and Evolution II	
Week 12	Monday	Ground-Dwelling Insects	<b>Quiz 4; Identification of Lepidoptera</b>
	Wednesday	Aquatic Insects I	
	Friday	Aquatic Insects II	
Week 13	Monday	Insects and Plants I	<b>Quiz 5; Identification of Diptera</b>
	Wednesday	Insects and Plants II	
	Friday	Insect Societies	
Week 14	Monday	Insect Societies II: Termites	<b>Quiz 6; Identification of Hymenoptera</b>
	Wednesday	Insect Societies III: Ants	
	Friday	GOOD FRIDAY; No School	
Week 15	Monday	Insect Societies IV: Bees	<b>Quiz 7; Insect Collections Curation</b>
	Wednesday	Insect Predation	
	Friday	Insect Parasitism	
Week 16	Monday	Forensic Entomology	<b>Insect Collections Due; Final Examination</b>
	Wednesday	Medical Entomology	
	Friday	Extra if needed	
Week 17	FINALS WEEK	<b>LECTURE EXAM III</b>	<b>8 May 2013 11 am - 1 pm</b>

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SPRING TERM 2013

January 12	SATURDAY:	Residence halls open for occupancy, 11:00 A.M.-5:00 P.M.
January 14	MONDAY:	Registration for undergraduate and graduate students - refer to <a href="#">Schedule of Classes</a> for details.
January 15	TUESDAY:	Registration for undergraduate and graduate students - refer to <a href="#">Schedule of Classes</a> for details.
January 16	WEDNESDAY:	<ul style="list-style-type: none"> <li>• Daytime on campus classes begin.</li> <li>• Late Registration.</li> <li>• Process class schedule changes. Refer to the <a href="#">Schedule of Classes</a> for details and deadlines.</li> <li>• Wednesday Night (WN) classes begin (on-campus and off-campus).</li> </ul>
January 17	THURSDAY:	Thursday Night (ThN) classes begin (on-campus and off-campus).
January 18	FRIDAY:	Friday Night (FN) classes begin (on-campus and off-campus).
January 19	SATURDAY:	Saturday classes begin (on-campus and off-campus)
January 21	MONDAY:	University Holiday - Martin Luther King Day.
January 22	TUESDAY:	Tuesday Night (TuN) classes begin (on-campus and off-campus).
January 28	MONDAY:	Monday Night (MN) classes begin (on-campus and off-campus).
February 1	FRIDAY:	<ul style="list-style-type: none"> <li>• Twelfth Class Day.</li> <li>• Last day to drop without a "Q" and receive 100% refund. <b>(This does not apply if only enrolled in one course - see resignation policy in <a href="#">Schedule of Classes</a>).</b></li> <li>• Degree applications to be filed in Registrar's Office by students graduating in May 2013.</li> </ul>
March 1	FRIDAY:	Last day to submit draft thesis / dissertation to Library for format and style review.
March 8	FRIDAY:	<ul style="list-style-type: none"> <li>• Residence halls close at 6:00 P.M. for spring recess.</li> <li>• Degree applications to be filed in Registrar's Office by students graduating in August 2013.</li> </ul>
March 11, 12, 13, 14, 15	MONDAY - FRIDAY	Spring recess for students and faculty.
March 17	SUNDAY:	Residence halls open at 2:00 P.M.
March 18	MONDAY:	Classes resume at 8:00 A.M.
March 28	THURSDAY:	Last day to complete a public defense of a thesis/dissertation.
March 29	FRIDAY:	Good Friday. Holiday for students and faculty.
April 10	WEDNESDAY:	Last day to submit complete, defended and signed thesis/dissertation to the appropriate academic dean's office.
April 12	FRIDAY:	<ul style="list-style-type: none"> <li>• Last day to submit final thesis/dissertation (defended and signed) and Route Sheet to the Director of the Library.</li> <li>• Last day to drop 1-hour science labs on MySam. See your department for additional drop information.</li> </ul>
April 19	FRIDAY:	<ul style="list-style-type: none"> <li>• Last day to make all final copies of thesis/dissertation and submit to the NGL for binding.</li> <li>• Last day to submit Route Sheet to the Dean of Graduate Studies.</li> </ul>
May 3	FRIDAY:	<ul style="list-style-type: none"> <li>• Last Class Day.</li> <li>• Last day to resign. Resignation must be received in Registrar's office by 5:00 P.M.</li> <li>• Last day to drop lecture courses on MySam. View <a href="#">Schedule Information</a> for more details.</li> </ul>
May 6, 7, 8, 9	Mon - Thu:	Final examinations [includes Monday Night (MN), Tuesday Night (TuN), Wednesday Night (WN) and Thursday Night (ThN) final examinations].
May 10	FRIDAY:	Residence halls close at 12:00 Noon.
May 10, 11	FRIDAY, SATURDAY:	Commencement, Bernard G. Johnson Coliseum.
May 13	MONDAY:	<ul style="list-style-type: none"> <li>• <b>12:00 Noon</b> Deadline for filing grades with Registrar's Office.</li> <li>• Spring Term ends.</li> </ul>

### Important Note:

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# BIOL 4410 General Entomology

## Class Syllabus and Course Explanation

### Undergraduate Spring 2013

**RESIGNATION NOTE:** Students may resign with a "W" grade from the 13th class day through the last class day, but prior to any final exams being taken or course completion.

#### **SAM POLICY**

**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.
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#### **Important Note:**

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