

## BSCI 337 – BIOLOGY OF INSECTS – Spring 2009

### Where and When:

**Lecture:** Plant Sciences Bld. 1111; Tuesday and Thursday 9:30-10:45am

**Lab:** Plant Sciences Bld. 1161; Monday 2:00-5:00pm (Sec. 1)  
or Tuesday 2:00-5:00pm (Sec. 2)

**Professor:** Dr. Jian Wang 3144 Plant Sciences, 301-405-7892, [jianwang@umd.edu](mailto:jianwang@umd.edu)

**Teaching Assistant:** Gwen Shlichta 3111 Skinner [bugheart@umd.edu](mailto:bugheart@umd.edu)

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### LECTURE SYLLABUS

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Date	Lecture Topic	#	By	Text Pages
Jan 27	Overview: The diversity and importance of insects	1	Wang	1-20
	<b>UNDER THE HOOD: HOW INSECTS WORK</b>			
Jan. 29	How insects are built: Skeletal anatomy	2	Shultz	21-48
Feb. 3	The insect machine: Muscles and locomotion	3	Wang	50-58
Feb. 5	Insect multimedia: Sensory systems and communication	4	Wang	86-112
Feb. 10	Hormones, circulation, and respiration (Internal I)	5	Wang	59-77
Feb. 12	Digestion, Excretion, and reproduction (Internal II)	6	Wang	77-84 114-140
	<b>INSECT EVOLUTION AND DIVERSITY</b>			
Feb. 17	The evolutionary origin of insects	7	Shultz	203-216
Feb. 19	<b>TEST I</b>			
Feb. 24	The diversity of insects I	8	Shultz	178-199; Appendix
Feb. 26	The diversity of insects II	9	Shultz	178-199; Appendix

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Lecture Syllabus

<b>Date</b>	<b>Lecture Topic</b>	<b>#</b>	<b>By</b>	<b>Text Pages</b>
Mar. 3	The diversity of insects III	10	Shultz	178-199; Appendix
	<b>INSECT DEVELOPMENT, LIFE HISTORY, and GENETICS</b>			
Mar. 5	Insect development and life history strategies: Diversity helps	11	Lamp	142-166
Mar. 10	The rhythm of life: How and why insects tell time	12	Lamp	166-175
Mar. 12	<b>TEST II</b>			
Mar. 16-20	<b>SPRING BREAK</b>			
Mar. 24	Insect societies: Evolution of living together	15	Lamp	299-326
Mar. 26	Ground-dwelling insects: Litter, dung, and fungi	16	Lamp	217-237
Mar. 31	Aquatic insects: Life under and on the water's surface	17	Lamp	239-261
Apr. 2	Insect genetics and genomics	11	Wang	
Apr. 7	Fruit fly as a model for human diseases	12	Wang	148-150
	<b>INSECT ECOLOGY</b>			
Apr. 9	Plant-insect interactions: Bugs versus drugs	18	Shrewsbury	263-298
Apr. 14	Insect defense: Bird droppings, bombardiers and barfometers	19	Shrewsbury	355-374
Apr. 16	Predator-prey and host-parasitoid interactions	20	Shrewsbury	327-353
Apr. 21	<b>TEST III</b>			

<b>Date</b>	<b>Lecture Topic</b>	<b>#</b>	<b>by</b>	<b>Text Pages</b>
<b>APPLIED ENTOMOLOGY</b>				
Apr. 23	Integrated Pest Management and the legacy of Silent Spring	21	Shrewsbury	395-425
Apr. 28	Integrated Pest Management	22	Shrewsbury	395-425
Apr. 30	Integrated Pest Management (con't)	23	Shrewsbury	395-425
May 5	Medical Entomology I	24	Wang	376-393
May 7	Medical Entomology II/ Forensic Entomology	25	Wang	376-393
May. 12	Career opportunities that make use of Entomology	26	Wang	
May. 15 (Friday ) 8-10 am	<b>FINAL EXAM</b>			

**Textbooks:** Lecture (required) - **The Insects: An Outline of Entomology, Third Edition**, by P. J. Gullan and P.S. Cranston (ISBN 1-4051-1113-5). Text pages on the lecture syllabus refer to Gullan and Cranston unless otherwise specified. Lab (optional) – **A Field Guide to the Insects**, by D .J. Borror and R. White.

**Grades:** Grades for the course will be computed from the class quiz, four lecture exams, insect collection, lab quiz, and practical scores. NO extra projects (i.e., term papers, etc.) will be assigned to improve grades.

**Make-up Examinations:** Make-up exams will not be given unless the absence is due to illness, religious observance, or participation in University activities at the request of University authorities. Documentation must accompany all requests for make-up examinations.

**Grading Scale:** 90%-100% = A, 80%- 89% = B, 70%-79% = C, 60%-69% = D, Below 60% = F

**Insect Collection:** An insect collection is **required** for this course; see details in the handout.

**No grade will be assigned in this course until your collecting equipment is returned at the end of the semester.**

**BREAKDOWN OF POINTS FOR BSCI 337 (Total = 800 Points)**

**LECTURE - 400 Points**

1. Class Quiz	60 Points
2. Lecture Exam I	80 Points
3. Lecture Exam II	80 Points
4. Lecture Exam III	80 Points
5. Final Exam	100 Points

**LAB - 400 Points**

**The instructor expects that all students in this class will follow the University of Maryland Code of Academic Integrity. Need a refresher on the Code? Read all about it at:**

**<http://www.studenthonorcouncil.umd.edu/code.html>**