

**Principles of Biology II – Ecology & Evolution (BSCI 160)  
Fall 2016 -- Dr. Leo Shapiro**

**COURSE SCHEDULE (approximate)**

<b>DATE</b>	<b>LECTURES &amp; EXAMS</b>	<b>READINGS*</b>	<b>HOMEWORK</b>
Aug 29 (Mon)	Course overview	None	
Aug 31 (Wed)	Evolution I	Ch. 15	
Sept 2 (Fri)	Evolution II	Ch. 15	
Sept 5 (Mon)	LABOR DAY	LABOR DAY	LABOR DAY
Sept 7 (Wed)	Natural selection I	Ch. 15	
Sept 9 (Fri)	Natural selection II	Ch.15	Antibiotic resistance
Sept 12 (Mon)	Particulate inheritance I	Ch. 8	
Sept 14 (Wed)	Particulate inheritance II	Ch. 8	Meiosis & Mendelian genetics
Sept 16 (Fri)	Hardy-Weinberg Equilibrium: a null model for evolution	15.3	Hardy-Weinberg Equilibrium
Sept 19 (Mon)	Causes of evolution	Ch. 15	
Sept 21 (Wed)	Evolution of disease & aging		
Sept 23 (Fri)	EXAM I	EXAM I	EXAM I
Sept 26 (Mon)	Evolution of sex & sexual selection	15.6; Pp. 306-307	
Sept 28 (Wed)	Behavioral ecology & evolution	40.5, 40.6	
Sept 30 (Fri)	Speciation	Ch. 17	
Oct 3 (Mon)	Phylogenies	Ch. 16	Phylogenetic trees
Oct 5 (Wed)	Prokaryotes & microbiomes	Ch. 19; 41.1	
Oct 7 (Fri)	Origin of eukaryotes	Ch. 20	

Oct 10 (Mon)	“Protists”	Ch. 20	
Oct 12 (Wed)	Plants	Ch. 21	
Oct 14 (Fri)	Fungi	Ch. 22	
Oct 17 (Mon)	Animals I	Ch. 23	
Oct 19 (Wed)	Animals II	Ch. 23	
Oct 21 (Fri)	EXAM 2	EXAM 2	EXAM 2
Oct 24 (Mon)	Macroevolution & the fossil record	Ch. 18	
Oct 26 (Wed)	Human evolution	23.7	
Oct 28 (Fri)	Domestication	24.4	
Oct 31 (Mon)	Distribution of ecosystems	41.2, 41.3	
Nov 2 (Wed)	Population growth I	Ch. 42	
Nov 4 (Fri)	Population growth II	Ch. 42	
Nov 7 (Mon)	Human population growth	Ch. 42	Population growth
Nov 9 (Wed)	Competition	Ch. 43	
Nov 11 (Fri)	Consumer-resource interactions I: predation & herbivory	Ch. 43	
Nov 14 (Mon)	Consumer-resource interactions II: parasites & parasitoids	Ch. 43	
Nov 16 (Wed)	Mutualism	Ch. 43	
Nov 18 (Fri)	EXAM 3	EXAM 3	EXAM 3
Nov 21 (Mon)	Biogeography	Ch. 44	Species-area curves
Nov 23 (Wed)	THANKSGIVING	THANKSGIVING	
Nov 25 (Fri)	THANKSGIVING	THANKSGIVING	
Nov 28 (Mon)	Community Ecology I	Ch. 44, 41.4	
Nov 30 (Wed)	Community Ecology II	Ch. 44, 41.4	

Dec 2 (Fri)	Ecosystem ecology I	45.1, 45.2, 45.3	
Dec 5 (Mon)	Ecosystem ecology II	45.1, 45.2, 45.3	
Dec 7 (Wed)	Human impacts on the environment I	45.4, 45.5, 45.6	
Dec 9 (Fri)	Human impacts on the environment II		Stuff: production & consumption
Dec 12 (Mon)	Human impacts on the environment III		
Dec 14 (Wed)	<b>FINAL EXAM</b> (Cumulative, with emphasis on Lectures XX-XX), 8-10 A.M.		

**\*All readings in Hillis et al., 2<sup>nd</sup> ed., unless otherwise indicated**

**Lecture Policies Overview (see Lecture Policies document for complete information)**

Lecture Instructor: Dr. Leo Shapiro

contact me through ELMS-Canvas - office hours by appointment - 3132 Plant Sciences Bldg - 301-405-3922

Textbook: Principles of Life, 2nd edition. Hillis et al. Sinauer/Macmillan.

Course website: The BSCI 106 website is maintained on ELMS using Canvas. To log in, go to:

<http://www.elms.umd.edu>

Course Points: XXX total points

a) Exams (350 pts): There will be three midterms (100 pts. each) and one comprehensive final (150 pts.). The lowest midterm will be dropped OR the lowest midterm and the final will be downweighted (whichever method yields higher grade; see Lecture Policies).

b) Homeworks (XX pts): There will be 7 Problem Sets (X pts each).

c) Online (ELMS) quizzes (XX pts): There will be X online quizzes (X pts each).

***\*\*Among the most important challenges of our time are issues relating to sustainability. A number of topics we cover in this course, particularly in the second part of the semester, are very relevant to understanding these issues and illustrate the important role of academic biology in developing public policy and, more broadly, the multidisciplinary approach that is often necessary to understand and address complex environmental problems\*\****