

Biology 102 Syllabus

Spring 2004

Module 1: Animal Diversity

Date	Pages	Topic	Additional assignments	This Week's Lab
4 Feb.	548-554	Ch. 28 The origins of eukaryotic diversity	Ch. 1, pages 7 –15 will be on Exam I	No labs scheduled
6 Feb.	633-645	Ch. 32 Introduction to animal evolution		
9 Feb.	646-650	Ch. 33 Invertebrates: Parazoa and Radiata		Laboratory 1
11 Feb.	651-660	Protostomia: Lophotrochozoa		
13 Feb.	661-677	Protostomia: Ecdysozoa and Deuterostomia	Adis, J. et al. 2002. Gladiators: a new order of insects. Sci. Am. (Nov.)	
16 Feb.	678-684	Ch. 34 Vertebrate evolution and diversity	Worksheet on Adaptations	Laboratory 2 Develop lab report Quiz on Lab 1
18 Feb.	685-692	Jawless vertebrates, fishes and amphibians		
20 Feb.	693-706	Amniotes		
23 Feb.	707-717	Primates and evolution of <u>Homo sapiens</u>	Wong, K. 2003. An ancestor to call our own. Sci. Am. (Jan.)	Laboratory 3 Turn in lab report Quiz on Lab 2
24 Feb.		Exam I	6:30 P.M.	

Module 2: Development and Physiology

Date	Pages	Topic	Additional assignments	This Week's Lab
25 Feb.	998-1006	Developmental processes	Development video	
27 Feb.	1007-1011	Morphogenesis	Results of Exam I	

1 Mar.	832-844, 850-852, 856-870	Animal Structure and Function, Digestion, Food acquisition, hormonal control of digestion	Material in Lab 4 will also be included on lecture Exam II. Worksheet on Digestion	Laboratory 4 Practical Exam on Labs 1, 2, and 3.
3 Mar.	871-886	Circulatory systems, the ECG, Blood pressure, composition of blood, blood clotting	CD - Blood pressure and ECG Worksheet Human Heart	
5 Mar.	886-894	Gas Exchange, control of ventilation	Worksheet on Gas Exchange	
8 Mar.	894-899	Oxygen-hemoglobin dissociation curve, gas transport	CD - Mechanics of Breathing, the Bohr effect, and gas transport.	Laboratory 5
10 Mar.	925-926, 936-948	Homeostasis, Osmoregulation, Excretory systems	Worksheet on Kidney Function	
12 Mar.	949-954	Hormonal control of the human kidney, RAAS	CD - Excretion and RAAS	
15 Mar.	955-966	Chemical signals in animals, the endocrine system		Laboratory 6 Practical Exam on Labs 4 and 5.
17 Mar.	966-980	Diabetes, the adrenals	Worksheet in class on Diabetes	
19 Mar. 29 Mar.	980-997	Mammalian Reproduction, animal reproduction, the menstrual cycle, Pregnancy, Parturition, and Contraception		Laboratory 7 Quiz on Lab 6
29 Mar.		Exam II	6:30 P.M.	
31 Mar.	1022-1032	Nervous systems, the nature of nerve signals	Results of Exam II Worksheet on the Nervous System	
2 Apr.	1033-1038	Synaptic transmission, transmitters	CD - Nervous conduction and transmission	
5 Apr.	1038-1047	The Evolution of nervous systems and the vertebrate nervous system		Laboratory 8 Quiz on Lab 7

7 Apr.	1057-1073	Sensory physiology, receptors, vision, hearing and equilibrium		
9 Apr.	1077-1089	Effectors, skeletal and muscular systems	CD - Muscle physiology. Worksheet on Muscle Physiology	

Module 3: Evolution/Behavior

Date	Pages	Topic	Additional assignments	This Week's Lab
12 Apr.	428-444	Ch. 22 Descent with modification: Darwin		Laboratory 9
14 Apr.	464-472	Ch. 24 The origin of species		
15 Apr.		Exam III	6:30 P.M.	
16 Apr.	1121-1127	Ch. 51 Behavioral biology: introduction and behavioral ecology	Plutchik, R. 2001. The nature of emotions. Am. Sci. (July-Aug.) Ch. 23, pages 445-452, read prior to Lab.10. This lab material will also be included on the final exam.	
19 Apr.	1128-1136	Learning and animal cognition	Blackmore, S. 2000. The power of memes. Sci. Am. (Oct.) Results of Exam III	Laboratory 10 Practical Exam on Labs 8 and 9.
21 Apr.	1137-1150	Social behavior and sociobiology	Maggioncalda, A. N. & R. M. Sapolsky. 2002. Disturbing behavior of the orangutan. Sci. Am. (June)	

Module 4: Ecology

Date	Pages	Topic	Additional assignments	This Week's Lab
23 Apr.	1090-1106	Introduction to Ecology		
26 Apr.	1151-1160	Population Ecology 1	Worksheet on Population Ecology	Laboratory 11 Quiz on Lab 10
28 Apr.	1161-1173	Population Ecology 2		
30 Apr.	1174-1186	Community Ecology 1		
3 May	1187-1197	Community Ecology 2	Worksheet on Community and Ecosystem Ecology	Laboratory 12 Field Trip Quizzes on Labs 11 and 12
5 May	1198-1208	Ecosystem Ecology 1		
7 May	1208-1223	Ecosystem Ecology 2		
10 May	1224-1247	Conservation Biology		
13 May		Final Exam	7 - 10 P.M.	

Biology 102: General Biology Spring 2004

Required texts:

Campbell, N.A., Reece, J. B. 2002. *Biology*. 6th ed. Benjamin/Cummings, Menlo Park, CA.

Ickes, R.A., March, J.G., McGrain, A.K., Trelka, D.G. 2004. *Laboratory Manual for Biology 102*. Phi Sigma Society, Washington and Jefferson College, Washington, PA.

Pechenik, J.A. 2004. *A Short Guide to Writing about Biology*. Pearson-Longman, NY.

Smith, D.G., Schenk, M.P. 2000. *A Dissection Guide and Atlas to the Mink*. Morton, Englewood, CA.

Recommended texts:

Rust, T. G. 1983. *A Guide to Biology Lab*. Southwest Educational Enterprises, San Antonio, TX.

Taylor, M. R. 2002. *Student Study Guide for Campbell/Reece Biology*. 6th ed. Benjamin/Cummings, Menlo Park, CA.

Course description:

Based on the theme of evolution, this is an introductory course of integrated lectures and laboratory experiences in animal diversity, physiology, evolution, behavior, and ecology. Laboratories incorporate the scientific method of gathering and evaluating data, as well as field experience.

Evaluation:

The basis of course evaluation and schedule of examination dates are as follows:

Examination I	24 February	9 lectures	100 points
Examination II	29 March	10 lectures	100 points
Examination III	15 April	9 lectures	100 points
Final Examination	May 13	11 lectures (plus 50 points from review of previous material)	150 points
5 Lecture quizzes – unannounced			25 points
Report for Laboratory 2 (10-point deduction if not submitted at 3 rd laboratory)			20 points
Practical examination on Laboratories 1, 2 & 3	Week of 1 March		25 points
Practical examination on Laboratories 4 & 5	Week of 15 March		25 points
Practical examination on Laboratories 8 & 9	Week of 19 April		25 points
Ten-point quizzes on Laboratories 1 & 2 (both total 10 points), 6, 7, 10, 11, & 12			60 points

Course regulations:

This course and Biology 101 may be taken in either sequence, but both must be completed satisfactorily (earned grades of C- or better) before one may apply advanced biology courses toward the major. Either course satisfies the laboratory science requirement in Division IV/General Education, Breadth of Study of the college curriculum.

By enrolling in this course, you are expected to attend all scheduled and announced meetings, lectures, and laboratory exercises. An absence will be excused only upon receipt of **written** notification from the office of the Dean of Academic Administration or the College Health Service, with the latter stating that you were seen by health service personnel. Unexcused absences from lectures beyond three will be reported to the Dean's office and may result in a penalty factor impacting your course grade. Any unexcused absence from laboratory will result in disqualification from any quiz, report, or examination associated with that laboratory and may disqualify you from receiving credit for completing the laboratory portion of the course. The laboratory portion of the course must be passed if credit for the laboratory science requirement in General Education, Breadth of Study is desired. **No make-up examinations will be given.** Any examination missed due to an unexcused absence will be evaluated as zero. An excused absence from an examination will be evaluated at the same percentage as work completed in the same category. All work submitted for credit in the course must be original and meet every criterion of honesty. Detection of dishonesty in any work may result in no credit for that work as well as dismissal from the course. Written assignments completed outside of class must properly acknowledge sources of any published information used. Failure to comply constitutes plagiarism.

You are responsible for taking notes in lecture, reading assigned pages in the text and lab manual, participating in class discussions, reading the supplemental articles by the dates indicated in the syllabus, contacting learning assistants to complete assigned worksheets, and coming prepared for each lab. Use of the study guide and attendance at reviews may also contribute to your success in the course. Besides seeking additional help from your lecture and lab instructors, it is highly recommended that you schedule weekly meetings with the Teaching Assistants available to you.