

Saint Joseph's University
Biology III--Organismic Biology
Course Expectations--Fall 2008

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Office hours will be posted on instructors' doors.

This is the third course in the Saint Joseph's Biology core sequence. Lectures and laboratory exercises will include a brief survey of organisms from all kingdoms and more detailed study of certain anatomical and physiological adaptations in plants and animals. The lecture and lab portions of this course are quite integrated--use the lab to help you understand the lecture material, and vice versa! Please see any of the instructors if you have any questions; office hours will be posted, or you can make an appointment in person, by email, or by phone.

Learning Objectives:

By the end of the course you will be able to:

- Describe the evolutionary relationships among organisms and explain basic mechanisms of evolution
- Identify the characteristics that define the major groups of prokaryotes, protists, fungi, animals, and plants, with special emphasis on animals and flowering plants
- Explain structure-function relationships in cells, tissues, and organs
- Describe similarities and differences in how plants and animals are adapted to environmental conditions

Your progress toward meeting the learning objectives will be assessed through lecture exams, lab quizzes, and laboratory worksheets and write-ups. You are encouraged to test your own progress toward meeting the objectives through individual and group study, answering questions at the end of chapters and on the textbook website, and discussions with your instructors.

Attendance and Honesty Policy

Attendance at lab and lecture is required. Make-up exams will not be given except by prior arrangement and at the discretion of the instructors. At all times your work must conform to the Saint Joseph's University Honesty Policy, as described in the college catalog.

Textbooks and study aids

You will use volumes II and III from the Life series by Purves, Sadava, Orians, and Heller. A CD is included with the book, and there is also an excellent website. Purchase of a laboratory manual from Ms. Clark in the stockroom is also required.

Lecture notes and other study aids can be found on the Blackboard webpage maintained by your instructors for this course. You should read over assignments before coming to lecture and lab, and always bring the appropriate textbook to lab.

Students with disabilities

If you have a documented disability (learning, physical, psychological) for which you are or may be requesting reasonable academic adjustments, you are encouraged to discuss your instructional needs with one of us and contact Services for Students with Disabilities, Room 113 Science Center, 610-660-1774 or 610-660-1620, as early as possible in the semester. Accommodations can only be provided to those students with current (within 3 years) documentation. All requests for reasonable academic adjustments such as extended time for tests must be discussed with one of us a minimum of one week before scheduled test date.

Grading

The lecture portion of this course is worth 75% of your grade. Points will be assigned as follows:

Three regular lecture exams, (100 pts each)	300 pts
Final exam (comprehensive)	150 pts
Lecture quizzes (5 pts each)	50 pts
TOTAL	600 pts

The Laboratory portion of this course is worth 25% of you grade. Points will be assigned as follows.

Two laboratory practical exams (50 pts each)	100 pts
Two laboratory writeups (50 pts each)	100 pts
Four laboratory worksheets (25 pts each)	100 pts
TOTAL	300 pts

Letter grades will be assigned as follows:

A 92-100	B+ 87-89	C+ 77-79	D+ 67-69
A- 90-91	B 83-86	C 73-76	D 60-66
	B- 80-82	C- 70-72	F <60

Date	Lecture Topic	Readings	Lab Topic
Sept 3 (W)	History of Life on Earth	Ch. 1,21 and Schlesinger Ch. 2 (Bb)	No Labs
Sept 5 (F)	Mechanisms of evolution	Ch. 22	
Sept 8 (M)	Speciation & Genome Evolution	Ch. 23, 24	Construct a phylogeny; evolution experiments. Lab reading: Ch. 25
Sept 10 (W)	The Prokaryotic Domains: Bacteria and Archaea	Ch. 26, 27	
Sept 12 (F)	Protista	Ch. 27	Data Analysis and Library Research Techniques
Sept 15 (M)	Protista	Ch. 27	
Sept 17 (W)	Fungi	Ch. 30	
Sept 19 (F)	Fungi	Ch. 30	
Sept 22 (M)	Seedless plants	Ch. 28	Survey of Prokaryotes, Protists and Fungi
Sept 24 (W)	Seedless plants, continued	Ch. 28	
Sept 26 (F)	Seed plants: Gymnosperms	Ch. 29	
Sept 29 (M)	Seed plants: Angiosperms	Ch. 29	Non-Vascular Plants and Vascular Non-flowering plants
Oct 1 (W)	Exam I – History of life thru Angiosperms		
Oct 3 (F)	Plant cells and tissues	Ch. 34	Internal Anatomy of Angiosperms and Start plant growth lab
Oct 6 (M)	Roots	Ch. 34	
Oct 8 (W)	Stems	Ch. 34	
Oct 10 (F)	Leaves	Ch. 34	
Oct 13 (M)	Transport in plants	Ch. 35	Gross Anatomy of Angiosperms (roots, shoots and leaves)
Oct 15 (W)	Plant Nutrition	Ch. 36	
Oct 17 (F)	Reproduction in Flowering Plants	Ch. 38	
Oct 20 (M)	Fall Break – No class		No Labs
Oct 22 (W)	Plant responses to the Environment	Ch. 39	
Oct 24 (F)	Exam II – Plant cells and tissues-Reproduction in Fl. Plants		
Oct 27 (M)	Animal origins and body plans	Ch. 31	Plant growth lab and Plant lab quiz
Oct 29 (W)	Origins of muscles and nerves: Cnidaria	Ch. 31	
Nov 31 (F)	The First Hunters: Platyhelminthes and Parasites	Ch. 32	
Nov 3 (M)	Molluscs	Ch. 32	Animal Diversity I
Nov 5 (W)	The worms: Nematodes and Annelids	Ch. 32	
Nov 7 (F)	Arthropods I	Ch. 32	
Nov 10 (M)	Arthropods II Invading the land	Ch. 32	Animal Diversity II
Nov 12 (W)	Our closest invertebrate relatives: Echinoderms	Ch. 33	
Nov 14 (F)	Us: the chordates	Ch. 33	
Nov 17 (M)	Exam III Animal Diversity		Circulation models and BioPac I and Lab Quiz II (animals)
Nov 19 (W)	Reproduction and development in animals	Ch. 42	
Nov 21 (F)	Circulation in animals	Ch. 49	
Nov 24 (M)	Gas exchange in animals	Ch. 48	No Labs
Nov 26 (W)	Thanksgiving holiday – No class		
Nov 28 (F)	Thanksgiving holiday – No class		
Dec 1 (M)	Excretion and osmotic balance	Ch. 51	BioPac Lab II
Dec 3 (W)	Homeostasis	Ch. 40	
Dec 5 (F)	Hormones: Signaling in and among animals	Ch. 41	
Dec 8 (M)	Sensory Biology	Ch. 45	Diversity of skeletal muscle fiber types (worksheet due in class)
Dec 10 (W)	Sensory Ecology	Ch. 45	
Dec 12 (F)	Review Session		