



# BROWARD COMMUNITY COLLEGE

## COURSE OUTLINE

**LAST REVIEW: 2003-2004**

*(i.e. 2003-2004)*

**NEXT REVIEW: 2008-2009**

*(i.e. 2008-2009)*

**STATUS: A**

*(A, I, D)*

**COURSE TITLE: General Zoology Laboratory**

**COMMON COURSE NUMBER: ZOO2010L**

**CREDIT HOURS: 1**

**CONTACT HOUR BREAKDOWN**

*(per 16 week term)*

**CLOCK HOURS:**

*(Voc. Course ONLY)*

Lecture:

Lab: **32**

Clinic:

Other:

**PREREQUISITE(S): None**

**COREQUISITE(S): ZOO2010 with a minimum grade of C**

**PRE/COREQUISITE(S):**

**COURSE DESCRIPTION** *(750 characters, maximum):*

Upon successful completion of this course, the students should be able to demonstrate a knowledge of the animal kingdom through prescribed activities that focus on the morphology, anatomy, and physiology of selected representative specimens. Laboratory experiments and activities to accompany ZOO 2010. Special fee charged. Dissection of animals is a component of this course.

General Education Requirements – Associate of Arts Degree (AA), meets Area(s): 4C  
General Education Requirements – Associate in Science Degree (AS), meets Area(s): 4C  
General Education Requirements – Associate in Applied Science Degree (AAS), meets Area(s): Area

**UNIT TITLES**

1. Use of the Microscope
2. Protozoa
3. Porifera, Cnidaria, Ctenophora
4. Platyhelminthes
5. Pseudocoelomates
6. Molluscs
7. Annelids
8. Arthropods
9. Echinoderms
10. The Chordates



# BROWARD COMMUNITY COLLEGE COURSE OUTLINE

## ASSESSMENT:

Please provide a brief description (250 characters maximum) that details how students will be assessed on the course outcomes.

*\*\*\* Complete the following only if course is seeking general education status \*\*\**

## GENERAL EDUCATION Competencies and Skills \*:

Please highlight in green font all Competencies/Skills from the list below that apply to this course. In the box to the right of the Competency/Skill, enter all specific learning outcome numbers (i.e. 1.1, 2.7, 5.12) that apply.

1. Read with critical comprehension	
2. Speak and listen effectively	
3. Write clearly and coherently	
4. Think creatively, logically, critically, and reflectively (analyze, synthesize, apply, and evaluate)	
5. Demonstrate and apply literacy in its various forms: (highlight in green ALL that apply) (1. technological, 2. informational, 3. mathematical, 4. scientific, 5. cultural, 6. historical, 7. aesthetic and/or 8. environmental )	(1) 1.1 – 1.6; 2.2 (3) 1.4 (4) 1.1, 1.3, 3.1 – 3.5, 4.1 – 4.4, 5.1 – 5.4, 6.1 – 6.3, 7.1 – 7.3, 8.1 – 8.5, 9.1 – 9.4, 10.1 – 10.5
6. Apply problem solving techniques to real-world experiences	
7. Apply methods of scientific inquiry	1.1 – 1.6
8. Demonstrate an understanding of the physical and biological environment and how it is impacted by human beings	
9. Demonstrate an understanding of and appreciation for human diversities and commonalities	
10. Collaborate with others to achieve common goals.	
11. Research, synthesize and produce original work	
12. Practice ethical behavior	
13. Demonstrate self-direction and self motivation	
14. Assume responsibility for and understand the impact of personal behaviors on self and society	
15. Contribute to the welfare of the community	

*\* General Education Competencies and Skills endorsed by '05-'06 General Education Task Force*



# BROWARD COMMUNITY COLLEGE

## COURSE OUTLINE

Common Course Number: ZOO2010L

### UNITS

#### Unit 1 Use of the Microscope

##### General Outcome:

- 1.0 The students should be able to understand the mechanics of light microscopy and demonstrate the ability to properly use the compound microscope and stereoscopic dissecting microscope in the performance of selected laboratory exercises or experiments.

##### Specific Measurable Learning Outcomes:

**Upon successful completion of this unit, the student shall be able to:**

- 1.1 Identify and describe the features and functions of the parts of the compound microscope and stereoscopic dissecting microscope.
- 1.2 Demonstrate the ability to place a specimen beneath the compound microscope and stereoscopic dissecting microscope using proper illumination and focus for viewing.
- 1.3 Compare and contrast general features of the compound microscope and stereoscopic dissecting microscope with other types of microscopes such as the phase contrast and the electron microscope.
- 1.4 Demonstrate the ability to calculate the total magnification at which specimens are being viewed in the laboratory.
- 1.5 Demonstrate the use of the oil immersion objective in examining selected slides.
- 1.6 Demonstrate the ability to properly clean and store the compound microscope and stereoscopic dissecting microscope.



# BROWARD COMMUNITY COLLEGE

## COURSE OUTLINE

Common Course Number: ZOO2010L

### Unit 2 Protozoa

#### General Outcome:

- 2.0 The students should be able to perform selected laboratory exercises or experiments involving protozoan organisms.

#### Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 2.1 Identify and distinguish among various taxa of protozoans.
- 2.2 Describe characteristics of protozoans based upon microscopic observations of preserved and living specimens.
- 2.3 Describe locomotion and osmoregulation in selected protozoans.
- 2.4 Compare and contrast unicellular and colonial protozoans.
- 2.5 Describe the life cycles of selected symbiotic and parasitic protozoans.
- 2.6 Perform selected laboratory exercises or experiments various protozoans.



# BROWARD COMMUNITY COLLEGE

## COURSE OUTLINE

Common Course Number: ZOO2010L

### Unit 3 Porifera, Cnidaria, Ctenophora

#### General Outcome:

- 3.0 The students should be able to perform selected laboratory exercises or experiments on members of the Porifera, Cnidaria, and Ctenophora.

#### Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 3.1 Identify and distinguish among the various taxa of Porifera utilizing observations of canal systems and spicules.
- 3.2 Recount the life cycles of selected members of the Porifera, Cnidaria, and Ctenophota.
- 3.3 Perform selected laboratory exercises or experiments on living members of the Porifera and Cnidaria as available.
- 3.4 Identify and classify in the appropriate taxon selected specimens of the Porifera, Cnidaria, and Ctenophora.
- 3.5 Perform or participate in dissection of representative specimens of the Porifera and Cnidaria, identify parts indicated by the instructor, and explain the function of each.



# BROWARD COMMUNITY COLLEGE COURSE OUTLINE

Common Course Number: ZOO2010L

## Unit 4 Platyhelminthes

### General Outcome:

- 4.0 The students should be able to perform selected laboratory exercises or experiments on members of the Platyhelminthes.

### Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 4.1 Identify and distinguish among the various taxa of Platyhelminthes.
- 4.2 Recount the life cycles of selected members of the Platyhelminthes.
- 4.3 Perform selected laboratory exercises or experiments on living members of the Platyhelminthes as available.
- 4.4 Perform microscopic examination of representative specimens of the Platyhelminthes, identify parts indicated by the instructor, and explain the function of each.



# BROWARD COMMUNITY COLLEGE COURSE OUTLINE

Common Course Number: ZOO2010L

## Unit 5 Pseudocoelomates

### General Outcome:

- 5.0 The students should be able to perform selected laboratory exercises or experiments on members of the Pseudocoelomates.

### Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 5.1 Identify and distinguish among the various taxa of Pseudocoelomates.
- 5.2 Recount the life cycles of selected members of the Pseudocoelomates.
- 5.3 Perform selected laboratory exercises or experiments on living members of the Pseudocoelomates as available.
- 5.4 Perform microscopic examination of representative specimens of the Pseudocoelomates, identify parts indicated by the instructor, and explain the function of each.

Common Course Number: ZOO2010L



# BROWARD COMMUNITY COLLEGE

## COURSE OUTLINE

### Unit 6 Molluscs

#### General Outcome:

- 6.0 The students should be able to perform selected laboratory exercises or experiments involving a large and diverse group of mainly marine organisms that are generally enclosed in a protective shell.

#### Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 6.1 Identify the characteristics that place animals in this group from both living and preserved specimens.
- 6.2 Recognize and distinguish among various organisms as belonging to the major groups of molluscans.
- 6.3 Perform or participate in representative dissections in this phylum, identify parts indicated by the instructor, and be able to explain the function of each.



# BROWARD COMMUNITY COLLEGE COURSE OUTLINE

Common Course Number: ZOO2010L

## Unit 7 Annelids

### General Outcome:

- 7.0 The students should be able to perform selected laboratory exercises or experiments on that group of animals that constitute the phylum Annelida.

### Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the student shall be able to:

- 7.1 Identify and distinguish among the various taxa of Annelids.
- 7.2 Identify the characteristics that place animals within this phylum.
- 7.3 Perform or participate in dissection of representative specimens of this phylum, identify parts indicated by the instructor and give the functions of each.



# BROWARD COMMUNITY COLLEGE

## COURSE OUTLINE

Common Course Number: ZOO2010L

### Unit 8 Arthropods

#### General Outcome:

- 8.0 The students should be able to perform selected laboratory exercises or experiments on members of the phylum Arthropoda and relate these experiences to the vast numbers of Arthropods, the types of habitats, and adaptations.

#### Specific Measurable Learning Outcomes:

**Upon successful completion of this unit, the student shall be able to:**

- 8.1 Identify important Arthropod characteristics among the various groups of Arthropods.
- 8.2 Identify and distinguish among the taxa of the Arthropods and recognize representative specimens.
- 8.3 Perform or participate in dissections of representative groups of the phylum, identify parts indicated by the instructor, and explain the function of each.
- 8.4 Recognize the various types of metamorphosis exhibited by the Arthropods.
- 8.5 Sex representative Arthropods indicated by the instructor.



# BROWARD COMMUNITY COLLEGE

## COURSE OUTLINE

Common Course Number: ZOO2010L

### Unit 9 Echinoderms

#### General Outcome:

- 9.0 The students should be able to perform specific laboratory exercises or experiments on the members of the phylum Echinodermata and understand the significance of their symmetry, embryology, and water vascular system.

#### Specific Measurable Learning Outcomes:

**Upon successful completion of this unit, the student shall be able to:**

- 9.1 Identify the characteristics of the members of the phylum and recognize representative specimens.
- 9.2 Demonstrate a working knowledge of the anatomy and function of the water vascular system and the skeletal system of Echinoderms.
- 9.3 Perform or participate in dissections of representative specimens, identify the parts indicated by the instructor, and explain the functions of each.
- 9.4 Explain various symbiotic relationships among Echinoderms and between other phyla.



# BROWARD COMMUNITY COLLEGE COURSE OUTLINE

Common Course Number: ZOO2010L

## Unit 10 Chordates

### General Outcome:

**10.0** The students should be able to perform specific laboratory exercises or experiments on chordates and relate these to the characteristics of the phylum.

### Specific Measurable Learning Outcomes:

**Upon successful completion of this unit, the student shall be able to:**

- 10.1 Identify the characteristics of members of the phylum and recognize representative specimens.
- 10.2 Recognize the evolutionary history of members of the phylum.
- 10.3 Taxonomically place representative specimens in the phylum.
- 10.4 Recognize the different adaptations of members of this phylum.
- 10.5 Perform or participate in dissections of representative members of this phylum, identify parts indicated by the instructor, and explain the functions of each.