**Laboratory Learning Outcomes and Objectives**

**Laboratory 8: ZOOLOGY PART III: KINGDOM ANIMALIA - HIGHER INVERTEBRATES AND CHORDATES**

*After completion of this laboratory session, and with 70% accuracy on the first laboratory quiz, the student should be able to:*

1. Describe the general morphology of organisms of phylum Arthropoda.
2. List characteristics that arthropods share with the phyla studied in previous exercises
3. Discuss characteristics of arthropods that are advanced over more primitive phyla
4. List representative genera of the major classes of arthropods
5. Describe modifications of the exoskeleton and paired appendages of arthropods
6. Discuss embryological characteristics that distinguish protostomes from deuterostomes
7. Describe the morphology of organisms of phyla Echinodermata,
8. Describe the water vascular system of echinoderms
9. Describe the morphology and features of the Chordata (Urochordates, Cephalochordates and Vertebrates)
10. List characteristics that echinoderms and chordates share with phyla previously studied
11. Discuss characteristics of echinoderms and chordates that are unique or advanced compared to more primitive phyla
12. Discuss the evolution of vertebrates
13. Answer the review questions at the end of the exercise