

## **COURSE OUTLINE** **Cadaver Dissection**

### **Course Description**

BI 245. Cadaver Dissection. 2 hours credit. Prerequisite: BI 240 or equivalent with a grade of C or better. This course will enable the student to prepare and dissect a human cadaver and to identify the major visceral organs and structures. It provides practical hands-on experience in the dissection of the whole body and in fine dissection of a specific region or organ. All major anatomical structures will be located and identified.

### **Course Relevance**

Every human body is unique - unlike the models and textbook illustrations provided in anatomy classes. Medical professionals require experience with the human body in its entirety to observe and understand this uniqueness.

### **Required Materials**

Tank, P., *Grant's dissector* (14<sup>th</sup> ed.). Baltimore, MD: Lippincott, Williams, and Wilkins

Broyles, R., (2008) *Anatomy and physiology revealed* (1<sup>st</sup> ed.). New York, NY: McGraw Hill

Plus the student may use the text that is currently being used in BI 240 or an equivalent anatomy and physiology text.

### **Supplemental materials**

Anatomy and physiology revealed. 4-CD set. (2006). McGraw-Hill Higher Education, Dubuque, Iowa.

### **Learning Outcomes**

The intention is for the student to be able to:

1. Prepare and dissect a human cadaver for detailed internal structure identification
2. Dissect and identify the major visceral organs and structures of the muscular, digestive, respiratory, circulatory, urinary and reproductive systems

### **Primary Learning PACT Skills that will be DEVELOPED and/or documented in this course**

Through the student's involvement in this course, he/she will develop his/her ability in the following primary PACT skill areas:

1. Speaking
  - Through the production of a presentation to a visiting class and classmates that explains the specific structures of the human body as revealed by the cadaver,

the student will gain confidence and skill in public speaking.  
Secondary skills (developed but not documented):

- Teamwork
- Ethical Conduct
- Critical Thinking
- Field-Related Technology
- Time Management

### **Major Summative Assessment Task(s)**

These learning outcomes and the primary Learning PACT skills will be demonstrated by:

1. Taking part in two group presentations explaining and correctly identifying the structure and function of the human body to outside student groups

### **Course Content**

- I. Themes – Key recurring concepts that run throughout this course:
  - A. Structure determines function
  - B. Function dictates structure
- II. Issues – Key areas of conflict that must be understood in order to achieve the intended outcome:
  - A. Every human body is unique, and therefore not exactly as presented in the textbook or by models
  - B. Dissection skills are not innate, but must be acquired through patience and practice
  - C. Reality, as seen with a cadaver, is very different from television-based anatomy experiences
  - D. The cadaver is a body donated by a human being, and as such must be treated and referred to with respect and dignity
  - E. Preservatives used in the embalming process are malodorous and exposure to them in a small classroom may cause nausea
- III. Concepts – Key concepts that must be understood to address the issues:
  - A. Terminology of the course
  - B. Human structure and function
- IV. Skills/Competencies – Actions that are essential to achieve the course outcomes:
  - A. Writing
  - B. Reading
  - C. Analytical thinking
  - D. Memorization of terms
  - E. Application of concepts

### **Learning Units**

- I. Introduction
  - A. Overview of the cadaver
  - B. Medical history of the cadaver
  - C. Ethics and respect

- II. Cadaver preparation
  - A. Skinning
  - B. Removal of adipose tissue
  - C. Muscle separation
  
- III. Muscular system
  - A. Muscles of the face, head, and neck
  - B. Muscles of the back
  - C. Muscles of the shoulders, chest and abdomen
  - D. Muscles of the upper limb
  - E. Muscles of the pelvic girdle and lower limbs
  
- IV. Cardiovascular and respiratory systems
  - A. Thoracic cavity
  - B. Head and neck
  - C. Shoulders and upper limbs
  - D. Abdomen
  - E. Pelvic girdle and lower limbs
  
- V. Nervous system
  - A. Brain
  - B. Cranium nerves
  - C. Peripheral nerves
  
- VI. Digestive system
  - A. Alimentary canal
  - B. Accessory organs
  
- VII. Urinary system
  - A. Kidneys
  - B. Ureters
  - C. Urinary bladder
  - D. Urethra
  
- VIII. Reproductive system
  - A. External structures
  - B. Internal structures

### **Learning Activities**

Dissection demonstrations, independent (outside of class) and collaborative (during class) dissection, anatomical structure identification, group discussions, student presentations, videos, and computer software.

### **Grade Determination**

The student will be graded on assessment tasks, quizzes, examinations, quality of

dissection, and class participation.