Course Prefix and Number: PSG 205  
Credits: 4

Course Title: Anatomy, Physiology, and Advanced Principles of Sleep

Course Description:
Provides a concentrated study of anatomy, physiology, and pathology essential to the practice of polysomnography. Presents the physiology of the nervous, cardiovascular, and pulmonary systems and basic pharmacological principles. Explores the pathophysiological differences between adult and pediatric sleep disorders. Prerequisites: PSG 101, PSG 110 - Introduction to the Science of Sleep Medicine, and PSG 190. Lecture 4 hours per week.

General Course Purpose:
Provides students with a foundation and understanding of human anatomy, physiology and pathology required to recognize the changes that take place within the body during normal sleep and sleep disorders. This course is required for the Sleep Technology for Polysomnography Career Studies Certificate.

Course Prerequisites/Co-requisites:
Prerequisites: PSG 101, PSG 110 - Introduction to the Science of Sleep Medicine, and PSG 190

Course Objectives:
Upon completing the course, the student will be able to:
1. Relate anatomical structures of the respiratory system to their functions.
2. Discuss the processes of ventilation and the control mechanisms.
3. Discuss the effects of sleep and arousal on respiration and ventilation.
4. Discuss the clinical relevance of gas exchange and transport.
5. Discuss basic arterial blood gas interpretation.
6. Describe and understand cardiac anatomy and physiology.
7. Identify main components of an electrocardiogram (ECG).
8. Understand the importance of basic ECG recognition for sleep technologists.
9. List the major risk factors for Sleep Related Breathing Disorder (SRBD) in children.
10. Explain the pathophysiology of pediatric SRBD.
11. Describe and discuss the neurobehavioral consequences and most common treatment modalities for pediatric SRBD.
12. Discuss the pharmacological effects on polysomnography.

Major Topics to be Included:
1. Anatomical structures of the respiratory system
2. Ventilation
3. Cardiac anatomy and physiology
4. Oxygen and carbon dioxide transport
5. Normal ranges for arterial blood bases (ABGs)
6. ECG
7. Pediatric sleep disorders
8. Basic pharmacology
9. Pharmacological effects on polysomnography and sleep architecture

Effective Date of Course Content Summary: March 22, 2012