

SOUTHEAST COMMUNITY COLLEGE
HEALTH SCIENCES DIVISION
POLYSOMNOGRAPHIC TECHNOLOGY
Revision Date: 9/2018

I. CATALOG DESCRIPTION

Course Number: PSGT 1010
Course Title: Polysomnography 1 Lab
Prerequisite(s):

Catalog Description: This course provides the hands-on application and simulation of scoring and performing a variety of methods to assess sleep and wakefulness. Methods for delivering positive airway pressure will be covered with emphasis on interface fitting and titration. Lab complements material presented in PSGT 1000.

Credit Hours: 2
Class Hours: 0
Lab Hours: 90
Total Contact Hours: 90

II. COURSE OBJECTIVES: *Course will:*

1. Detail the International 10-20 system of electrode placement.
2. Provide hands-on application of equipment used to measure sleep and wakefulness.
3. Provide simulation of polysomnography.
4. Provide hands-on application of scoring rules.
5. Define emergencies in the sleep center, including technologist's responsibilities.
6. Provide simulation of PAP fitting and titration.
7. Determine safety and legal concerns of the sleep center.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. STUDENT LEARNING OUTCOMES: *Student will be able to:*

1. Demonstrate competency in preparing for patient arrival.
2. Demonstrate competency in patient orientation.
3. Demonstrate competency in patient hook-up.
4. Demonstrate competency in data acquisition.
5. Demonstrate competency in diagnostic polysomnography.
6. Demonstrate competency in PAP fitting and titration procedures.
7. Demonstrate competency in safety and emergency procedures.

B. GENERAL EDUCATION LEARNING OUTCOMES

GELO 6: Career and Life Skills

Outcome 4: Use digital technology effectively to access, manage, integrate, evaluate, and present information.

IV. CONTENT/TOPICAL OUTLINE *(course outline may provide more detailed information)*

A. Preparing for patient arrival

1. Patient's chart
2. Facility condition
3. Equipment
4. Entering patient data into sleep system

B. Preparing the patient

1. Orientation to the facility
2. Measuring
3. Applying electrodes (EEG, EOG, EMG, EKG)
4. Applying respiratory effort monitoring devices
5. Applying oximeter probe
6. Applying thermistor and/or nasal pressure transducer
7. Applying end-tidal CO₂
8. Education on equipment
9. Education on procedure
10. Education on PAP therapy
11. PAP fitting

C. Data acquisition

1. Montage selection
2. Alternative derivations for EEG and EOG
3. Filter and sensitivity/gain settings
4. Machine calibration
5. Biocalibration
6. Impedance check

D. Polysomnography

1. Pre-test questionnaire
2. "Lights out" procedure
3. Documentation of baseline values, patient values and technician interventions
4. Artifact recognition and resolution
5. Potential equipment malfunction and troubleshooting
6. Determining need for oxygen/split night study
7. "Light on" procedure
8. Post-test questionnaire
9. Equipment removal and cleaning

E. Positive airway pressure

1. Indications
2. Interface device selection and fitting
3. Titration protocols

F. Scoring

1. Staging
2. Respiratory events
3. Limb movements
4. Arousals

5. Cardiac events
6. Calculations
7. Report generation
8. Archiving

V. INSTRUCTIONAL MATERIALS

A. Required Text(s):

Spriggs, William. *Essentials of Polysomnography*, Jones & Bartlett
 American Academy of Sleep Medicine. The AASM Manual for the Scoring of Sleep and Associated Events v2.4.

B. Other Resources:

AASM Practice Guidelines (website)
 AASM Interscorer Reliability System (website)

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:

1. Lecture videos
2. Demonstration videos
3. Websites
4. Class participation
5. Case studies
6. Interactive videos
7. Interactive assessments
8. Flashcards & games

VII. METHODS OF EVALUATION

A. Methods of evaluation typically include a combination of assignments, quizzes, exam, projects, skill checkoffs, etc. For grading expectations, please see the course information document.

SCC STANDARD GRADING SCALE POLICY:

A+	95-100	C+	75-79
A	90-94	C	70-74
B+	85-89	D+	65-69
B	80-84	D	60-64
		F	Below 60

VIII. SPECIFIC COURSE REQUIREMENTS

A. ATTENDANCE

Attendance is crucial to the success of this course. Any class missed could mean valuable missed information, which is difficult to obtain. Please notify the instructor of any pending absences or if you will be late. Absences in excess of four hours may result in failing the course.

- B.** Must pass all program courses with a C+ or better to progress to next term.
- C.** Must achieve a 75% or higher on all competencies to progress to next term.