

# POLYSOMNOGRAPHY (RSPS)

## Courses

### **RSPS 210. Foundation of Polysomnography and Sleep Medicine. 2 Units.**

Covers the history of sleep medicine (polysomnography) from its inception and development to current practice. Enhances understanding of the role and differences of the polysomnographer. Teaches the documentation process in sleep laboratory facilities and understanding of the data required for monitoring patient and charting results during the study. Lectures include physiological factors that identify normal sleep pattern in adult and pediatric populations.

### **RSPS 216. 3- and 12-Leads ECG Interpretation. 2 Units.**

Reviews 3-leads interpretation with advancement to 12-leads ECG. Reviews cardiac anatomy and physiology, underlying pathophysiology, and basic rhythm recognition with an overview of related treatments. Emphasizes skills needed by the bedside practitioner to differentiate between benign and life-threatening cardiac dysrhythmias. Includes principles of application and interpretation of the 12-lead system. Emphasizes recognition of the acute myocardial infarction.

### **RSPS 227. Neuroanatomy and Physiology of Sleep. 3 Units.**

Covers the basic neuroanatomy of the brain and nervous system that is involved in the various normal and abnormal sleep patterns. Additional topics include: sleep pharmacology and medications; pharmacokinetics, drug mechanism of action; review of basic cardiac physiology and waveforms; respiratory anatomy and physiology and its relation to the central nervous system.

### **RSPS 230. Polysomnography Science Methodology. 2 Units.**

Addresses preparation of sleep study patients and use of electroneurodiagnostic equipment in the polysomnography laboratory. Includes electrode placement; principles of the conduction system, signal derivation, and amplification; signal processing, filter, and sensitivity; calibration; and, AC/DC instrumentation.

### **RSPS 234. Polysomnography Patient Education and Safety. 1 Unit.**

Covers the management of patient safety in the sleep laboratory. Topics include: patient education about sleep, common chief complaints relative to sleep disorders, infection control, cultural differences and interactions, ethics, and professionalism in the sleep laboratory.

### **RSPS 256. Polysomnography Monitoring and Scoring. 2 Units.**

Teaches student to manage and identify device monitoring, such as: vital signs; EEG, ECG, EOG, and EMG waveforms; visual, arousal, cardiac, movement, and respiratory scoring criteria and applicable protocols for observation and documentation. Assessing, monitoring, and recording patient-movement disorders, parasomnias, psychiatric sleep disturbances, and sleep. Data interpretation and recognition and their relation to sleep disorders. Prerequisite: RSPS 210, RSPS 216, RSPS 230.

### **RSPS 274. Polysomnography Diseases. 3 Units.**

Recognition of sleep disorders and their pathophysiologies. Includes adult and pediatric obstructive sleep apnea, hypopneas, respiratory effort-related arousals, central apneas, complex sleep apnea, and Cheyne-Stokes. Introduces CPAP and titration methods, bilevel ventilation, oxygen therapy, and surgical interventions as treatments. Addresses nonrespiratory sleep disorders, such as narcolepsy, hypersomnia, insomnia, seizures, and epilepsy. Prerequisite: RSPS 210, RSPS 227.

### **RSPS 286. Polysomnography Case Study. 2 Units.**

Student presents patient-case studies based on patient-information gathering that includes history and physical, review of systems, rationale for diagnostics and treatment, vital signs, PMH, questionnaire, scores, waveform, treatments, and study data.

### **RSPS 295. Polysomnography Practicum I. 4 Units.**

Introduction to sleep center facilities, working hours, documentation, and personnel. Practice in patient assessment, obtaining patient history, complete set up, data acquisition, and reporting processes. Includes waveform interpretation, sleep study scoring, and patient monitoring. Application of interventional modalities to relieve relative sleep disorders. Prerequisite: RSPS 210, RSPS 216, RSPS 227, RSPS 230.

### **RSPS 296. Polysomnography Practicum II. 4 Units.**

Gives students opportunities to perform advanced clinical procedures in the sleep center and perform complete polysomnogram independently under supervision of the sleep center staff. Prerequisite: RSPS 210, RSPS 216, RSPS 227, RSPS 230, RSPS 295.

### **RSPS 510. Sleep Neurophysiology and Pathologies. 3 Units.**

First course in a three-course series. Case study-based analysis covering sleep disorders that involves various normal and abnormal sleep patterns and respiratory drive. Discusses common sleep pathologies and pharmacological interventions and treatment.

### **RSPS 511. Methodologies in Sleep Disorder Assessment and Intervention. 3 Units.**

Second course in a three-part series. Introduces foundations of patient preparation for polysomnogram evaluation. Discusses physical principles employed in acquiring and interpreting cardiac, neurological, and respiratory diagnostics. Reiterates components of a PSG, cardiac diagnostics (including 3/12-lead ECG), and neurodiagnostics relevant to evaluation of sleep disorders.

### **RSPS 512. Advanced Polysomnography Practicum. 3 Units.**

Clinic-based practicum in which students perform a variety of sleep assessments including patient set up, observation/monitoring, data acquisition, evaluation, and scoring. Applies interventional modalities, such as CPAP or bi-level therapy, with appropriate titration to relieve respiratory-related sleep disorders. Opportunities to perform advanced clinical procedures in the sleep center and to perform complete polysomnographs independently. Prerequisite: RSPS 510, RSPS 511.