

Polysomnography

Program Number: 80-515-1

Advanced Technical Certificate

Health-Related Professions Program Cluster

School of Health Education

Program offered at Madison Campuses

For information call: (608) 246-6065, (608) 246-6697 or
(800) 322-6282 Ext. 6065 or 6697

About the Certificate

This advanced technical certificate is designed to prepare health care professionals to work in Polysomnography (sleep) laboratories. Polysomnography is the study of sleep patterns and abnormalities. Students study electro-encephalography (EEG), the study of the electrical activity of the brain; electrooculography (EOG), the study of the electrical activity of the eye; and electromyography (EMG), the study of the electrical activity of muscles. This certificate also includes electrocardiology (ECG), the study of the electrical activity of the heart as well as the effects of sleep on the respiratory system.

Students learn to: perform diagnostic procedures to help identify sleep-related disorders, operate state-of-the-art medical equipment for both diagnosis and treatment of sleep-related disorders, compile and analyze (score) information from an overnight sleep study, educate patients and their families about sleep disorders and treatments, identify normal and abnormal patterns of sleep/wake states and explore the neurological and cardiopulmonary systems.

Unique Requirements for Admission

Must be a graduate of one of the following accredited programs: Respiratory Therapist, Registered Nurse, Practical Nurse, Paramedic or have a minimum of an Associate of Applied Science degree with evidence of Human Anatomy classes. Must have current two-person, infant through adult CPR certification and a current Physical examination prior to classes beginning. This program curriculum has been designated by the Board of Registered Polysomnographic Technologist (BRPT) as an alternative educational pathway for purposed of establishing registry eligibility.

Career Potential:

- Sleep Researcher
- Polysomnography (Sleep) Technician

Curriculum

Courses	Credits	Hrs/week	
		Lec	Lab
10-515-140 Introduction to Polysomnography.....	2	6	0
10-515-141 Polysomnography Fundamentals 1.....	2	6	0
10-515-142 Polysomnography Fundamentals 2.....	2	6	0
10-515-144 Polysomnography Clinical Practice 1.....	1	0	8
10-515-145 Polysomnography Clinical Practice 2.....	2	2	8
Total	9		

Courses

10-515-140 Introduction to Polysomnography 2 credits
An overview of the field of Polysomnography including job responsibilities, normal and abnormal sleep patterns, and integrating the physiologic functions of the nervous, respiratory, cardiovascular systems and common sleep disorders. Emphasis placed on basic sleep sciences, neurophysiology, monitoring, electrical safety, diagnosis and treatment methods including CPAP, BiPAP, Oxygen therapy and surgical interventions. This course runs six hours a week for six weeks.

10-515-141 Polysomnography Fundamentals 1 2 credits
A basic discussion of recording sleep apnea. Patient setup, electrode application for overnight recordings, the sleep history and the technologists' assessment of the patient are discussed in detail with emphasis on instrument settings and calibration, recording parameters and an introduction to commonly used ancillary equipment. This course runs six hours a week for six weeks.

10-515-142 Polysomnography Fundamentals 2 2 credits
Presentation and discussion of the techniques of sleep staging. Respiratory event scoring, movement and arousal scoring criteria are also outlined. Covers recognition of normal and abnormal sleep patterns, effects of medication on sleep patterns, respiratory patterns and movement and arousal patterns, along with criteria for recognition of EKG and EEG abnormalities. Introduces the student to the major categories of sleep disorders in the infant and pediatric patient, provides an overview of the specific polysomnographic features and the special preparation needed in these populations. This course runs six hours a week for six weeks.

10-515-144 Polysomnography Clinical Practice 1 1 credit
Directed practice in the clinical setting in a sleep laboratory or a sleep center. Emphasis in overseeing periodic cessation of respiratory activity based on placement and monitoring of the following: electro-encephalography (EEG), electro-oculography (EOG), electrocardiography (ECG), electromyography (EMG), pulse oximetry (SpO2), inductive plethysmography and airflow thermocouple. Can be taken concurrently with 10-515-141.

10-515-145 Polysomnography Clinical Practice 2 2 credits
Directed practice in the clinical setting in a sleep laboratory or a sleep center. Assist in adult and pediatric patient setup and discontinuance in monitoring complete sleep studies. Emphasis on scoring a sleep montage related to respiratory cessation. This course can be taken concurrently with 10-515-142.

More detailed and updated information on this program may be available at: madisoncollege.org. The college reserves the right to make changes in the regulations and courses announced in this publication without notice.

Madison Area Technical College provides equal opportunity in education and employment.

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