



**Sleep Diagnostics Technology Program**  
**TECHNICAL CERTIFICATE**  
**SLEEP DIAGNOSTICS**  
**TECHNOLOGY**

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Thank you for your interest in the Sleep Diagnostics Technology program. We're very pleased at the success of our on-line format and the convenience it has to offer.

In addition to the online didactic courses, however, there are two clinical practice courses that require in-person attendance. The first of these will be during the summer semester. For the summer Clinical Practice 1 course, students will be divided into groups that meet weekly with an instructor in our on-campus sleep lab for training and practice with the equipment used for diagnosing sleep disorders, with some other observational requirements. Residents of East TN have the option of receiving this training in the Bristol, TN area. Please keep in mind that the fall clinical rotations will require off campus travel as well as time spent in the hospital clinical environment for continued hands-on practice and patient interaction under the guidance of a preceptor.

The Sleep Diagnostics Technology program is fully accredited through the Commission on Accreditation of Allied Health Education Programs (CAAHEP) in cooperation with the committee on Accreditation for Polysomnographic Technology (CoA-PSG). CAAHEP, 1711 Frank Ave., New Bern, NC 28560, 252-626-3238

The program adheres to the College's equal opportunity policy and has limited enrollment. The class size is limited. The Sleep Diagnostics Program is a selective, limited-access admission program. Program applications must be submitted no later than October 1<sup>st</sup>. Students who qualify are granted an interview in late November. To qualify for an interview, please refer to the following checklist:

1. \_\_\_\_\_ Apply online to the Sleep Diagnostic Program at <http://www.volstate.edu/sleep> . Click on the Link on the left of the page that says, "Apply to the Sleep Diagnostics Program". Simply Click "submit" after completing the application. The deadline to apply online is October 1st for the class beginning in January. Applicants are strongly encouraged to apply early. Admission to the program is limited and on a competitive basis.
2. \_\_\_\_\_ Complete all Volunteer State Community College Admission Criteria. Visit <http://www.volstate.edu/Admissions/> for details.
3. \_\_\_\_\_ Once accepted to the college, please make an appointment to see your advisor.
4. \_\_\_\_\_ Selection preference will be given to students who have completed a Medical Terminology course, AHC 115. Though there are no pre-requisite courses listed for the certificate route, it will be competitive admission, so other coursework completed will be considered especially courses in mathematics or science. Much of the selections are based on an interview. During this interview, you may be asked questions that test your skill in basic arithmetic as well. Additional patient care experience will also be considered.

The application deadline for the Technical Certificate in Sleep Diagnostics Technology is October 1<sup>st</sup>, and classes will begin the following spring. Sleep Program coursework begins in January and ends in December of the same calendar year. You will take courses in the program during the spring, summer, and fall semesters. All accepted applicants in the Sleep Program will be required to purchase one textbook in the bookstore or online for the spring semester. The textbook is **Sleep Disorders Medicine, 4th Edition**, (author's name is Sudhansu Chokroverty, MD, FRCP, FACP).

### **Program Screening:**

After the October 1<sup>st</sup> application deadline, all applications will be reviewed by the selection committee on the following criteria:

1. Selection preference will be given to students who have successfully completed, or are in the process of successfully completing a Medical Terminology course, AHC 115. Though there are no pre-requisite courses listed for the certificate route, it will be competitive admission, so other coursework completed will be considered especially courses in mathematics or science.
2. Employment in polysomnography/Sleep Diagnostics/or additional patient care experience will also be considered.
3. On-line application responses.
4. Students making it through the application screening will be invited for an interview before final selections are made. During this interview, you may be asked questions that test your skill in basic arithmetic as well. These interviews may be conducted in a virtual environment to accommodate long-distance applicants.
5. Applicants are notified via email.
6. Licensure as a polysomnographic technologist in the state of Tennessee after graduation will require a background check and drug screen, so applicants should be aware of this before applying to this program.

Once all your required applicant information has been reviewed by the selection committee, and you have been formally selected for the program, you will be contacted further with instructions for the registration process and advising assistance with computer accessibility.

If you would like to review the computer requirements for the program, please go to the Volunteer State website and click on the TBR Link located at the top of the page. Click on “Regents Online Degree Programs” at page left, then [rodp.org/orientation](http://rodp.org/orientation) link at the top of the page, then click “Technical Requirements” Tab at top of the page. There you will find computer requirements for the online courses of this program.

**AHC 115 - Medical Terminology** During applicant screenings in October, students currently enrolled or who have completed Medical Terminology will rank higher for selection during the screening process. Students who test below college level in math will be disadvantaged in the selection process.

A Technical Certificate is awarded upon successful completion of the Sleep Diagnostics program courses. This certificate is accredited through CAAHEP which means it will qualify you to sit for the RPSGT credentialing exam and to apply for a state license to practice polysomnography. If you live outside of TN, then that may not apply to you.

Students who wish to obtain an Associate of Applied Science degree can do so by completing the general education core as indicated in the college catalog under the AAS in Health Sciences Degree plan. These courses are: English Composition I, Humanities or Fine Arts, Natural Science, Social Science, and either Communications or Math. Additionally, there are 13 credits which are a mix of required courses and electives to complete the degree requirements. You must contact your advisor, Mel Matthews at [Mel.matthews@volstate.edu](mailto:Mel.matthews@volstate.edu) or (615) 230-3366 or 1-888-335-8722, ext. 3366 to discuss courses needed for the general education core and electives. Upon completion of the Sleep Diagnostics courses, the general education courses and electives, the student will then be eligible to receive an AAS – Health Sciences degree in Sleep Diagnostics Technology.

Please keep in mind that the school does not guarantee employment or salaries to any of its Health Sciences Program enrollees or graduates. We recommend that you contact your area hospital’s sleep lab for employment and pay rate information. Sleep labs may also require you to work 10 to 12 hour shifts with a majority of staff working nights.

Feel free to pick up a Sleep Diagnostics Technology brochure (located in the Division of Health Sciences) or connect to the following websites for information about the exciting world of sleep medicine:

[www.apptweb.org](http://www.apptweb.org)  
[www.brpt.org](http://www.brpt.org)  
[www.asset.org](http://www.asset.org)  
[www.aasmnet.org](http://www.aasmnet.org)

Should you require any additional information, please contact Mel Matthews at [mel.matthews@volstate.edu](mailto:mel.matthews@volstate.edu), or (615) 230-3366 or 1-888-335-8722, ext. 3366.

Thank you.

## Course Outline-Total Program Hours 31

### Spring Term: Physical Aspects of Polysomnography-6 Hours

Class	Title	Hours	Description
PSG 101	Anatomy & Physiology of Sleep Disorders	3	This class will discuss the anatomy and physiology that is specific to sleep disorder medicine. Areas covered will include: Structure of the Nervous System, Macro- and Micro- Anatomy including the upper and the lower airway, the Respiratory System and the Heart, Circadian Rhythm Biology, Sleep Architecture and the Physiology of REM.
PSG 102	Classification of Sleep Disorders	3	In this class, the 77 classified sleep disorders will be discussed. There will be special concentration on those sleep disorders seen in the sleep lab for polysomnographic evaluation. Upon completing this course, the student will understand the importance a PSG technologist plays in the diagnosis of sleep disorders. The Student will have an understanding of the importance of documentation in the sleep center setting, and the importance of having adequate history and physicals on the patient.

### Summer Term: Technical Application of Polysomnography-7 Hours

Class	Title	Hours	Description
PSG 110	Sleep Polysomnography Instrumentations	3	This course will cover three major items;  (1) Basic electronics – ohms law, current, resistance, impedance and the pathway of a signal from patient to polygraph (2) analog PSG's – the pathway of a signal from cable to paper, sensitivity, low frequency filters, high frequency filters, time constants, calibration procedures, trouble shooting an analog machine and other ways analog machines may be affected. (3) Digital PSG's – basic anatomy of a computer system, comparisons of amplifiers, sampling rates (the nyquist theory), bits, bytes, how the signal is converted with a computer system and how it differs between systems, relationship between settings on analog equipment versus digital equipment, and calibration procedures.
PSG 120C	Clinical Practice I: Laboratory	4	Included in this course are: 10/20 method of head measurement, proper preparation, application and

			placement of electrodes, montages, protocols, impedance checks, bio, mechanical and electrical calibrations, trouble shooting, vital sign assessment, documentation and note-taking. Clinical Instructor: Mel Matthews or Kelia Ingram for West TN. *Upon completion of this semester, the student should be able to set-up and run a sleep study with minimal amount of guidance.
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**Fall Term: Data Analysis of Polysomnography- 18 hours**

Class	Title	Hours	Description
PSG 130	Data Management in Polysomnography	4	This course will review the mathematical equations that are used in a sleep report. It will provide the student with knowledge of how to review a sleep report for accuracy, focusing on sleep documentation for the PSG technologist, editing and reviewing physician's final reports. Also covered will be the proper flow of patients into the lab as is expected of an accredited sleep disorders center. Data base management of a sleep lab will be covered – time permitting.
PSG 131	Sleep Scoring	4	This course will include sleep staging of adults and pediatrics, respiratory scoring, scoring of PLMS, scoring of REM density, scoring of EKG arrhythmia's and recognition of atypical EEG patterns.
PSG 132	Sleep Registry Review	4	This course includes basic test review, test preparation, pre-tests and test review for the BRPT exam. It will also include management principles of a sleep disorders center.
PSG 133C	Clinical Practice II: Clinical Rotations	6	Supervised clinical application to include 10/20 set-up and running study, patient preparation, montages, protocols, impedance checks, calibrations, trouble shooting, vital sign assessment, proper documentation, note-taking and study termination.

**Clinical Affiliations:** Students will have the opportunity to perform sleep studies with a clinical instructor or preceptor at an area hospital within middle Tennessee and outlying counties.

In addition to completing the Technical Certificate in Sleep Diagnostics, students may also wish to further their education by completing general education courses and electives. Upon completion of the General Education and elective component, the student will be eligible to apply for the Associate of Applied Science degree (Health Sciences option).

For more information regarding the General Education and Elective core for the AAS –Health Sciences option, please contact:

Mel Matthews at (615) 230-3366 or 1-888-335-8722 ext. 3366 or email at [mel.matthews@volstate.edu](mailto:mel.matthews@volstate.edu)

# Technical Standards for Sleep Diagnostics Technology Program

**In order to be considered a candidate for the Sleep Diagnostics Technology Program and profession, students must be able to reasonably perform the following skills as indicated in the following Technical Standards. These skills are related to affective, cognitive, and psychomotor domains.**

## **Affective: The affective domain includes communication and behavior.**

Students enrolled in the Sleep Diagnostics Technology Program must be able to effectively communicate in the clinical and classroom setting. This requires students to possess the skills needed to communicate in English, both verbal and written, in an unassisted manner. Students must also conduct themselves in both an ethical and professional manner while in the clinical and classroom settings. All students will be required to follow the Statement of Professional Conduct/Student Clinical Contract as indicated in the Volunteer State's Sleep Diagnostics Technology Program Policy and Procedure Manual for Clinical Education. During completion of the entire curriculum, students will be trained and must continuously demonstrate competent professional behavior and knowledge in, but not limited to, the following areas: appropriate interactions between technologist and patient, appropriate interaction between technologist and other health professionals, legal and ethical principles for patient care, patient rights and responsibilities, and confidentiality.

## **Cognitive: The cognitive domain includes the knowledge base and skills required to perform proper patient assessment, collection and interpretation of data, as well as the use of sound judgment.**

Students enrolled in the Sleep Diagnostics Technology Program must possess visual skills and auditory skills needed to perform proper patient assessment, reading of physician's orders, and reading sleep disorder clinic protocol approved by designated medical director. During completion of the entire curriculum, students will be trained and must continue to use sound judgment with interpretation of patient data for delivery of therapeutic interventions. Students must also demonstrate proficiency and use sound judgment with, but not limited to, the following areas: patient chart review, patient assessment techniques, patient orientation techniques, monitoring, documentation, and patient safety and emergency procedures.

## **Psychomotor: The psychomotor domain includes performance of patient care, to include, but not limited to: patient assessment, performance of polysomnography modalities, and diagnostic procedures.**

Students enrolled in the Sleep Diagnostics Technology Program must possess the physical and manual dexterity to perform polysomnography techniques and procedures, which includes the following: prepare all polysomnography equipment for testing; follow protocol for polysomnography hook-ups utilizing standard electrode application using 10/20 method; utilize proper application of ancillary equipment; preparation of acquisition system and selection of correct recording montages; perform bio-physical calibrations; proper monitoring and documentation during polysomnography recordings; event recognition and management with CPAP/BiPAP therapeutic interventions and low-flow oxygen administration; troubleshooting and artifact correction during polysomnography recordings; infection control; patient safety and emergency procedures. Students must be able to perform patient assessment on patients sitting or laying in bed, cardiopulmonary resuscitation (CPR) on adults and pediatrics, move patients in and out of chairs or bed, stand for extended time periods, attend clinical rotations at night lasting 10-12 hours, lift and/or move a minimum of 50 pounds, and walk quickly or run to emergencies, which may or may not require the use of stairs.

## **Additionally:**

Be aware that some clinical affiliate sites require students to provide evidence of a passing score on a background check, a urine drug screen, proof of immunity to Hepatitis B, a TB skin test, and additional orientation requirements before attending fall clinical rotations at those facilities. Should these be required, they will all be performed at the student's expense.

**Sleep Diagnostics Technology Program  
Estimate Program Costs\*  
(SUBJECT TO CHANGE)**

**1. Tuition Costs & Financial Aid**

a. Fees are charged per credit hour taken. Students will pay maintenance fees, health science fees, and tuition based on the number of credit hours taken each semester (<http://www.volstate.edu/businessoffice/fees.php> . Listed below are the hours per semester.

b. If you have questions concerning financial aid, please contact the VSCC Financial Aid Office directly at (615) 230-3456 for assistance. **Please direct all questions related to financial aid to the VSCC Financial Aid Office.**

**c. Spring Term: 6 Total Hours**

**d. Summer Term: 7 Total Hours**

**e. Fall Term: 18 Total Hours**

**2. Books**

**Cost = roughly \$450.00**

a. **Spring Term:** Chokroverty, Sudhansu, Sleep Disorders Medicine, 3rd Edition

**3. Clinical Costs (estimated)**

a. Disease Screening (titers)	<b>60.00</b>
b. Hepatitis B Injections	<b>150.00</b>
c. Varicella Vaccination	<b>50.00</b>
d. Measles Vaccination	<b>30.00</b>
e. Malpractice Insurance	<b>39.00</b>
f. Lab Coat	<b>30.00</b>
g. Scrub Suits (per pair)	<b>40.00</b>
h. ID Badge	<b>12.00</b>
i. Hospital Parking (Possibly)	<b>15.00</b>

4. **Basic Life Support Class** **45.00**

5. **Background Check & Urine Drug Screen** **40.00**  
 a. (Required during Summer Term) **75.00**

6. **6. TN Sleep Society Student Membership (Non-Voting)\*** **00.00**

**7. After Graduation:**

8. **Board Registered Polysomnographic Technologist Exam** **450.00**

9. **TN State Licensure including background check** **256.00**

**\*ALL COSTS SUBJECT TO CHANGE**