

Polysomnography Technology Mississippi Curriculum Framework

Program CIP: 51.0917 – Polysomnography

2022



Published by:

Mississippi Community College Board
Division of Workforce, Career, and Technical Education
3825 Ridgewood Road
Jackson, MS 39211
Phone: 601-432-6155
Email: curriculum@mccb.edu

Faculty Writing Team Members

Kristina Davis, Instructor and Program Coordinator, Coahoma Community College
Rosdalyn Seymore, Instructor, Coahoma Community College

Administrator Writing Team Members

Dr. Chequitia Dixon, Dean of Health Science, Coahoma Community College

Business and Industry Writing Team Members

Sherie Denham, Panola Medical Center, Sleep Center Director
Shaquana Henderson, Practicing Sleep Technician, Coahoma Community College (Graduate)
Baptist CVL and Memphis EEG/ Sleep Tech Vision of Hope Director of Behavioral Health
Tiffany Wilder, Polysomnography Technology, Admin Asst. Coahoma Community College
Darrick Whitfield, TH.D., M.DIV, BS, RRT, RPSGT, Director of Neurophysiology and Sleep Disorders Center

Office of Curriculum, Instruction and Assessment Team Members

Scott Kolle, Ph.D. Director of Curriculum and Instruction, Office of Curriculum and Instruction, Mississippi Community College Board
LaToya Rembert Sterling, Ph.D. Curriculum Specialist, Office of Curriculum and Instruction, Mississippi Community CollegeBoard
Sheriece Robinson, Ed.D. Curriculum Specialist, Office of Curriculum and Instruction, Mississippi Community CollegeBoard

The Office of Curriculum and Instruction (OCI) was founded in 2013 under the Division of Workforce, Career, and Technical Education at the Mississippi Community College Board (MCCB). The office is funded through a partnership with The Mississippi Department of Education (MDE), who serves as Mississippi's fiscal agent for state and federal Career and Technical Education (CTE) Funds. The OCI is tasked with developing statewide CTE curriculum, programming, and professional development designed to meet the local and statewide economic demand.

Copyright© 2022 by Mississippi Community College Board
For information, please contact curriculum@mccb.edu.

Contents

Faculty Writing Team Members	2
Administrator Writing Team Members.....	2
Business and Industry Writing Team Members.....	2
Office of Curriculum, Instruction and Assessment Team Members	2
Adoption Of National Certification Standards	5
Industry Job Projection Data	6
Articulation.....	6
Assessment	6
Program Description	7
Suggested Course Sequence	8
Career Certificate Required Courses	8
Technical Certificate Required Courses	8
Electives	9
Special Project in Polysomnography.....	9
Required Courses	11
PSG 1113 Polysomnography Pathophysiology	11
PSG 1116 Introduction to Polysomnography	13
PSG 1123 Polysomnography Technology	16
PSG 2214 PSG Scoring & Analysis	18
PSG 2218 Clinical Applications I	20
PSG 2227 Clinical Applications II	23
PSG 2132 Professional Transition.....	26
PSG 2224 Polysomnography Capstone.....	27
PSG 291 (1-3) Special Project in Polysomnography	28
WBL I, II, III, III, IV, V, and VI	29
WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)	29
Business office Technology Course.....	30
Appendix A: RECOMMENDED TOOLS AND EQUIPMENT	31
Appendix B CURRICULUM DEFINITIONS AND TERMS	33
Appendix C: Recommended Textbook List	35
Appendix D: Course Crosswalk	36
WBL I, II, III, III, IV, V, and VI	36
Special Project in Polysomnography.....	36

Adoption Of National Certification Standards

The CoA PSG is a member of the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The mission of the CoA PSG in cooperation with CAAHEP is to establish, maintain and promote appropriate standards of quality for educational programs in Polysomnographic Technology and to provide recognition for educational programs that meet or exceed the minimum standards outlined in the accreditation Standards and Guidelines for the Accreditation of Educational Programs in Polysomnographic Technology.

CAAHEP is the largest programmatic accreditor in the health sciences field. In collaboration with its Committees on Accreditation, CAAHEP reviews and accredits over 2000 educational programs in health science occupations. CAAHEP is recognized by the Council for Higher Education Accreditation (CHEA). CAAHEP is also a member of the Association of Specialized & Professional Accreditors (ASPA).

In this curriculum, students will be prepared for positions in the area of Polysomnography/ Sleep Technology (PSG).

The Committee on Accreditation for Polysomnographic Technologist Education is involved in programmatic process of accreditation. The CoA PSG reviews educational programs in polysomnographic technology to determine the extent to which the program meets the Standards and Guidelines for the Accreditation of Educational Programs in Polysomnography Technology.

After evaluating a program, the CoA PSG formulates a recommendation for accreditation, and forwards it to the Commission on Accreditation of Allied Health Education Programs (CAAHEP). CAAHEP reviews the CoA PSG recommendation, assures that due process took place during the evaluation process, and makes the final award of accreditation.

Accreditation is awarded to a program when it is determined that the program is in substantial compliance with the standards. Accreditation provides assurance that educational programs are following national standards that have been developed by the profession. In addition, graduates of CAAHEP-accredited polysomnography programs are eligible to take the Board of Registered Polysomnographic Technologists exam (BRPT).

Industry Job Projection Data

A summary of occupational data is available from the Mississippi Department of Employment Security.

<https://mdes.ms.gov/information-center/labor-market-information/>

Articulation

Because of the specific nature of the Polysomnography Technology program, there are not articulated courses from a Secondary Career Pathway programs.

Assessment

Colleges should report the following for students who complete the program with a career certificate, technical certificate, or an Associate of Applied Science Degrees for technical skills attainment. To use the approved Alternate Assessment for the following programs of study, colleges should provide a Letter of Notification to the Director of Career Technical Education at the MS Community College Board. Please see the following link for further instructions: <http://www.mccb.edu/wkfEdu/CTDefault.aspx>.

CIP Code	Program of Study
51.0917	Polysomnography Technology
Level	Standard Assessment
Career	
Level	Standard Assessment
Technical/AAS	Registered Polysomnographic Technician (RPSGT) Examination http://www.brpt.org

Program Description

The Polysomnography Technology program includes three award levels. The Career and Technical Certificates in Polysomnography are fast paced technical and clinical training. The Associates of Applied Science in Polysomnography combines general education with technical and clinical training. All award levels prepare the successful graduate to work as a polysomnographic technician performing diagnostic studies to evaluate sleep related disorders and conditions as well as assisting physicians in therapeutic modalities. Students will learn the skills needed to perform quality sleep studies; the knowledge of major sleep disorders; and the interventions to assist patients in attaining more healthful sleep.

Students in good standing are eligible to take the Registered Polysomnographic Technologist (RPSGT) exam, which complies with the highest workplace standards for Polysomnographic Technologist.

The goal is to prepare graduates to evaluate and assist in diagnosing sleep disorders such as sleep apnea, narcolepsy, cataplexy, and insomnia. Parasomnias, such as night terrors, bedwetting, sleep-eating, and sleepwalking, are also viewed by polysomnographers. Students are trained to conduct various testing with a range of equipment. From performing an electroencephalography, which charts brain activity to observing a patient's respiratory function, there are many technologies and techniques that polysomnography technology students must master.

Suggested Course Sequence

Career Certificate Required Courses

			SCH Breakdown				Certification Information
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Clinical	Total SCH Hours	
BOT 1613	Medical Terminology	3	3	0		45	
BIO 2513	*Anatomy & Physiology I	3	3	0		45	
BIO 2511	*Anatomy & Physiology Lab	1		2		60	
PSG 1116	Introduction to Polysom	6	4	4		180	
PSG 1113	Polysom Pathophysiology	3	3	0		45	
PSG 1123	Polysom Technology	3	3	0		45	
PSG 2214	PSG Scoring and Analysis	4	4	0		60	
PSG 2218	Clinical Application I	8	0	0	24	1080	
	Electives	1					
TOTAL		32					

*Pre-requisites/co-requisites: Must be completed during or prior to admission into the Polysomnography Program.

Orientation and Medical Terminology will be pre-requisites or co-requisites 4 hrs.

Technical Certificate Required Courses

			SCH Breakdown				Certification Information
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Clinical	Total SCH Hours	Registered Polysomnographic Technologist (RPSGT) Examination
PSG 2132	Professional Transitions	2	2	0		30	
PSG 2224	PSG Capstone	4	4	0		60	
PSG 2227	Clinical Application II	7	0	0	21	945	
	Total	13					

Electives

Course Number	Course Name	Semester Credit Hours
SSP 100 (2-3)	Smart Start 101	2-3
LLS 1311HS	Orientation	1
WBL I, II, III, III, IV, V, and VI WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)	Work Based Learning	1-3
PSG 291 (1-3)	Special Project in Polysomnography	1-3
	All other electives approved per local community college	

General Education Core Courses

To receive the Associate of Applied Science degree, a student must complete all of the required coursework found in the Career Certificate option, Technical certificate option, and a minimum of 15 semester hours of General Education core. The courses in the General Education Core may be spaced out over the entire length of the program so that students complete some academic and Career Technical courses each semester or provided primarily within the last semester. Each community college will specify the actual courses that are required to meet the General Education Core Requirements for the Associate of Applied Science degree at their college. The Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) Section 9 Standard 3 of the *Principles of Accreditation: Foundations for Quality Enhancement*¹ describes the general education core.

Section 9 Standard 3:

3. The institution requires the successful completion of a general education component at the undergraduate level that
 - a) is based on a coherent rationale.
 - b) is a substantial component of each undergraduate degree program. For degree completion in associate programs, the component constitutes a minimum of 15 semester hours of the equivalent; for baccalaureate programs, a minimum of 30 semester hours or the equivalent.
 - c) ensures breadth of knowledge. These credit hours include at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural science/mathematics. These courses do not narrowly focus on those skills, techniques, and procedures specific to a particular occupation or profession.

General Education Courses

			SCH Breakdown			Contact Hour Breakdown		Certification Information
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Contact Hours	Lecture	Lab	Certification Name
	Humanities/Fine Arts	3						
	Social/Behavioral Sciences	3						
	Math/Science	3						
	Academic electives	6						
	TOTAL	15						

¹ Southern Association of Colleges and Schools Commission on Colleges. (2017). *The Principles of Accreditation: Foundations for Quality Enhancement*. Retrieved from <http://www.sacscoc.org/2017ProposedPrinc/Proposed%20Principles%20Adopted%20by%20BOT.pdf>

Required Courses

Course Number and Name:

PSG 1113 Polysomnography Pathophysiology

Description:

This course provides a concentrated study of anatomy and physiology and an in-depth study of human pathological processes and their effects on homeostasis. Emphasis is placed on the physiology of the nervous, cardiovascular, and pulmonary systems and basic pharmacological principles as well as the interrelationships among organ systems in deviations from homeostasis. Upon completion, students should be able to demonstrate a detailed knowledge of sleep pathophysiology.

Hour Breakdown:	Semester Credit	Lecture	Lab	Clock
	3	3	0	45

Prerequisite:

None

Student Learning Outcomes:

1. Demonstrate knowledge of anatomy and physiology of the cardiovascular system and the effect it has on sleep.
 - a. Explain the mechanics of blood flow. BRPT TASK A6, COA PSG C1E
 - b. Discuss the importance of proper blood flow. BRPT TASK A6, COA PSG C1E
2. Demonstrate knowledge of anatomy and physiology of the respiratory system and the effect it has on sleep.
 - a. Explain the mechanics of breathing. BRPT TASK DOMAIN 3 A3, COA PSG C1E
 - b. Explain the anatomic locations of the collapsible portions of the upper airway. BRPT TASK DOMAIN 3 A3, COA PSG C1E
3. Demonstrate knowledge of anatomy and physiology of the nervous system and the effect it has on sleep.
 - a. Explain the many structures of the brain. COA PSG C1E
 - b. Demonstrate knowledge of brain activity and how it affects sleep stages. COA PSG C1E
4. Demonstrate knowledge of pathophysiology of sleep disorders (non-respiratory).
 - a. Identify the major categories of sleep disorders according to the Internationals Classification of Sleep Disorders. BRPT TASK DOMAIN 1 TASK A iii
 - b. Describe signs and symptoms associated with major categories of sleep and arousal disorders. BRPT TASK DOMAIN 1 TASK A iii
 - c. Summarize the major categories of sleep and arousal disorders based on age-specific criteria. BRPT DOMAIN 1 TASK A iii, BRPT DOMAIN 2 TASKC 1-2
 - d. Describe the most commonly encountered sleep disorders in infants and children. BRPT DOMAIN 2 TASK C2
 - e. Describe the most commonly encountered sleep disorders in the elderly. BRPT DOMAIN 2 TASK C1

- f. Understand the varieties of treatments for sleep disorders. BRPT DOMAIN 1 TASK Bii
- 5. Demonstrate knowledge of pathophysiology of sleep disorders (respiratory). BRPT TASK DOMAIN 1 TASK A iii, ABSM C1
 - a. Identify the major categories of sleep disorders according to the Internationals Classification ofSleep Disorders. BRPT TASK DOMAIN 1 TASK A iii
 - b. Describe signs and symptoms associated with major categories of sleep and arousal disorders. BRPT TASK DOMAIN 1 TASK A iii
 - c. Summarize the major categories of sleep and arousal disorders based on age-specific criteria. BRPT TASK DOMAIN 1 TASK A iii
 - d. Describe the most commonly encountered sleep disorders in infants and children. BRPT TASK DOMAIN 1 TASK A iii
 - e. Describe the most commonly encountered sleep disorders in the elderly. BRPT DOMAIN 2 TASK C1

Course Number and Name:

PSG 1116 Introduction to Polysomnography

Description:

This course introduces the polysomnography profession. Topics include the history of the profession and the role of the polysomnographic technologist, infection control, basic patient assessment, and medical gas therapy, introduction of scoring rules, cardiac rhythms, and positive airway pressure. Upon completion, students should be able to demonstrate competence in concepts through written and laboratory evaluations.

Hour Breakdown:	Semester Credit	Lecture	Lab	Clock
	6	4	4	180

Prerequisite:

None

Student Learning Outcomes:

1. Summarize general preparation and safety guidelines for patients and polysomnographic technologists.
 - a. Identify emergency equipment and location. COA PSG C1H
 - b. Identify locations of emergency exits. COA PSG C1H
 - c. Describe appropriate process for accessing EMS. COA PSG C1K
 - d. Demonstrate knowledge of HIPAA protections and patient confidentiality. COA PSG C1F
 - e. Describe appropriate measures for assuring patient confidentiality and patient rights (such as the right to refuse treatment). COA PSG C1F
 - f. Demonstrate knowledge of professional/ethical behavior, conduct appropriate conversations, and follow policies and procedures. COA PSG C1H
 - g. Establish patient rapport, interact appropriately, and make patient comfortable with the procedure. COA PSG C1G
 - h. Demonstrate knowledge of infection control and universal precautions, utilize hand washing procedures, and use gloves appropriately. COA PSG C1I
 - i. Utilize appropriate infection control procedures. COA PSG C1I
 - j. Demonstrate knowledge of equipment including electrode and sensor cleaning and maintenance, and clean items appropriately to assure disinfection. COA PSG C1I
 - k. Perform chart review of history and physical, and review chart prior to testing. BRPT DOMAIN 1 TASK A ii
 - l. Review and assure completeness of questionnaires. BRPT DOMAIN 1 TASK A vii
 - m. Conduct an appropriate and complete patient interview to include: sleep history, sleep patterns, typical sleep routine, symptoms, caffeine and medication intake, and sleep complaints. BRPT DOMAIN 1 TASK A iv-vii
 - n. Evaluate patient and adjust approach to meet individual learning, communication and other needs to include readiness to learn/mental age, ability to communicate, and physical, emotional and cultural needs. BRPT DOMAIN 1 TASK A iv-vii
 - o. Make appropriate age specific adjustments in education, recording and documentation and scoring processes to include patient/caregiver education, equipment, montage and parameter adjustments, recording and documentation adjustments, and scoring adjustments. BRPT DOMAIN 1 TASK A, BRPT DOMAIN 2 TASK A, BRPT DOMAIN 2 TASK C1-2
 - p. Verify documentation is appropriate by ensuring documentation is legible, complete,

signed, and dated. BRPT DOMAIN 1 TASK A1, COA PSG C1a

2. Manage patient and equipment orientation.

- a. Adhere to orientation process greet patient appropriately and verify identity. BRPT DOMAIN 1 TASK A v
- b. Orient the patient based on age and physical needs such as patient room layout and amenities, call bell/intercom, patient bathroom, patient kitchen, medication storage and access, patient belongings storage area, and appropriate exit in case of emergency. BRPT DOMAIN 1 TASK A v
- c. Provide an age appropriate explanation of the testing procedure. BRPT DOMAIN 1 TASK A v
- d. Demonstrate the ability to utilize and ability to verbalize the function of the following equipment: COA PSG C1a, BRPT DOMAIN 2 TASK A i
 - (1) Polysomograph
 - (2) Oximeter and/or capnograph
 - (3) Audio/video equipment
 - (4) Reusable/disposable electrodes
 - (5) Thermistors/thermocouples/pressure transducers
 - (6) Effort sensors
 - (7) Cannulas (pressure monitoring, oximetry, O2 delivery, dual purpose)
 - (8) Snoring sensors

3. Demonstrate knowledge of treatment of sleep disorders (respiratory).

- a. Explain the application of PAP devices for sleep-related breathing disorders. BRPT DOMAIN 1 TASK B iii, BRPT DOMAIN 4 TASK A
- b. Explain the application of oxygen for sleep-related breathing disorders. BRPT DOMAIN 4 TASK B
- c. Summarize the concomitant use of PAP devices and oxygen for sleep-related breathing disorders. BRPT DOMAIN 4 TASK A-B
- d. Explain the principles of correct PAP titration techniques. BRPT DOMAIN 4 TASK A, BRPT DOMAIN 1 TASK C
- e. Explain the principles of correct oxygen titration techniques. BRPT DOMAIN 4 TASK B
- f. Explain the contraindications and complications for PAP. BRPT DOMAIN 4 TASK A
- g. Explain the contraindication and complications for oxygen therapy. BRPT DOMAIN 4 TASK B
- h. Give examples of responses to complications of PAP. BRPT DOMAIN 4 TASK A
- i. Give examples of complications of oxygen therapy. BRPT DOMAIN 4 TASK B
- j. Give examples of responses to complications of combined PAP and oxygen therapy. BRPT DOMAIN 4 TASK A-B
- m. Demonstrate an appropriate PAP mask fitting. BRPT DOMAIN 4 TASK A4, BRPT DOMAIN 1 TASK C

4. Perform and document PSG recording & monitoring.

- a. Accurately perform and document instrument calibrations. BRPT DOMAIN 2 TASK B, COA PSG C1c
- b. Perform and document physiologic calibrations, making necessary adjustments. BRPT DOMAIN 2 TASK B, COA PSG C1c
- c. Provide appropriate patient instructions for the recording and inform patient of how to contact the technologist during the night. COA PSG C1a
- d. Accurately document lights out. COA PSG C1c
- e. Monitor EEG to assure quality of signals. BRPT DOMAIN 2 TASK D1
- f. Accurately identify sleep stages. BRPT DOMAIN 2 TASK D1
- g. Accurately identify sleep onset, arousals, awakenings, and sleep fragmentation. BRPT DOMAIN 2 TASK D 4
- h. Assure adequate function of airflow signals. BRPT DOMAIN 2 TASK D 4

- i. Evaluate accuracy of oxygen saturation and carbon dioxide monitoring signals. BRPT
DOMAN 3 TASK A4 & Biv
 - j. Identify limb movements, respiratory events electroencephalogram (EEG) Patterns, and cardiac rhythms. BRPT DOMAIN 3 TASK A & B
 - k. Assure adequacy of respiratory effort signals. BRPT DOMAIN 3 TASK A3 & Biv
 - l. Monitor ECG for arrhythmias. BRPT DOMAIN 3 TASK A6 & Bvi
 - m. Consistently document at appropriate intervals and with all position and instrumentation changes throughout the recording. COA PSG C1a, BRPT DOMAIN 3 TASK C2
 - n. Perform and document lights on procedure appropriately. COA PSG C1a, BRPT DOMAIN 3 TASK C2
 - o. Complete appropriate pre and post-recording calibrations. BRPT DOMAIN 2 TASK B, COA PSG C1c
 - p. Document an accurate summary of the night's recording. BRPT DOMAIN 3 TASK C2, COA PSG C1a & C1c
 - q. Demonstrate the ability to save, transfer, and archive files according to established protocols. COA PSG C1c, BRPT DOMAIN 3 TASK C
6. Demonstrate ability to recognize and respond to clinical events.
- a. Identify the major categories of sleep disorders according to the International Classification of Sleep Disorders. BRPT DOMAIN 1 TASK Aiii
 - b. Describe signs and symptoms associated with major categories of sleep and arousal disorders. BRPT DOMAIN 1 TASK Aiii, COA PSG C1a
 - c. Summarize the major categories of sleep and arousal disorders based on age- specific criteria. BRPT DOMAIN 1 TASK Aiii, COA PSG C1a
 - d. Describe the most commonly encountered sleep disorders in infants and children. BRPT DOMAIN 3 TASK B, COA PSG C1a
 - e. Describe the most commonly encountered sleep disorders in the elderly. BRPT DOMAIN 3 TASK A, COA PSG C1a
7. Demonstrate the ability to recognize and respond to technical and patient events.
- a. Recognize and correct artifacts in the recording. BRPT DOMAIN 2 TASK D2
 - b. Demonstrate ability to troubleshoot equipment, determine source of artifact or equipment malfunction and make appropriate adjustments. BRPT DOMAIN 2 TASK D2
 - c. Demonstrate ability to identify and correct patient generated artifact. BRPT DOMAIN 2 TASK D2
 - d. Identify and document recording variances caused by medication effect (e.g. Prozac eyes, increased spindle activity). BRPT DOMAIN 1 TASK 1 iv
 - e. Demonstrate the ability to handle difficult situations with patients professionally.

Course Number and Name:

PSG 1123 Polysomnography Technology

Description:

This course introduces the fundamental concepts of electricity and test equipment in the field of Polysomnography. Topics include basic DC and AC principles (voltage, resistance, current, and impedance), components (resistors, inductors, and capacitors), power, and operation of test equipment.

Hour Breakdown:	Semester Credit	Lecture	Lab	Clock
	3	3	0	45

Prerequisite:

None

Student Learning Outcomes:

1. Demonstrate the knowledge of the principles of electrical conduction and safety.
 - a. Explain basic electricity and magnetic, electrical conduction, polarity, conductors, resistors, capacitors, transistors, insulators, Ohm's law, sensitivity, filters, circuits, AC amplifiers, DC amplifiers, differential amplifiers, signal multiplexers, and common mode rejection.
 - b. Demonstrate the understanding of basic AC/DC instrumentation.
 - c. Summarize the process of measuring the electromechanical functions of the human body, including extra-cellular potentials created by cardiac, brain, muscle, and integumentary.
 - d. Explain and demonstrate principles of the function and handling of electrodes, electrolytic substances, and fixatives.
 - e. Explain the frequency and voltage characteristics of EEG, EOG, EMG, and ECG.
 - f. Explain and demonstrate impedance measurements and impedance meters. BRPT DOMAIN 2 TASK A v
 - g. Prepare sample montages indicating the channel derivation and how they differ for referential and bipolar recordings. BRPT DOMAIN 2 TASK A ii
 - h. Explain signal calibration, electrical baseline, time axis and mechanical baseline.
 - i. Discuss the origins of artifact and demonstrate artifact elimination. BRPT DOMAIN 2 TASK D2
 - j. Summarize the effect of different time bases on the PSG signal display.
 - k. Summarize and demonstrate the principles of electrical safety.
2. Demonstrate the knowledge and montage including signal derivation and amplification.
 - a. Explain and demonstrate the principles of signal calibration as they pertain to digital and analog recording systems, and substandard signal calibrations. BRPT DOMAIN 2 TASK B
 - b. Explain and demonstrate the principles of evaluation impedance and the use of impedance meters. BRPT DOMAIN 2 TASK A v
 - c. Explain and perform the principles of physiological calibration. BRPT DOMAIN 2 TASK B
 - d. Explain and perform the principles of troubleshooting electrical and mechanical problems.
 - e. Explain and demonstrate the principles of alteration of amplifier settings. BRPT DOMAIN 2 TASK D 5
 - f. Explain and demonstrate the principles of derivation alteration. BRPT DOMAIN 2 TASK D 3
 - g. Demonstrate the knowledge and application of signal processing (filter, sensitivity) & calibrations. BRPT DOMAIN 2 TASK D 5
3. Prepare and demonstrate the acquisition system.

- a. Define the AASM recommended recording parameters for standard PSG. BRPT DOMAIN 3
 - b. Define and demonstrate bipolar and referential montages. BRPT DOMAIN 2 TASK A ii
 - c. Describe routine montages (PSG, MSLT, MWT, PSG with PAP, seizure, parasomnia) and modifications for specific montage types (i.e. additional EEG leads for seizure montage). BRPT DOMAIN 2 TASK A ii, BRPT DOMAIN 2 TASK C
 - d. Define and demonstrate the principles related to minimum sampling rates for various signals. BRPT DOMAIN 2 TASK D5
 - e. Define and demonstrate appropriate high and low frequency filter settings for various signals. BRPT DOMAIN 2 TASK D5
 - f. Define and demonstrate appropriate sensitivity/gain settings for various signals. BRPT DOMAIN 2 TASK D5
 - g. Demonstrate the ability to change the epoch display size. BRPT DOMAIN 2 TASK D5
 - h. Demonstrate the ability to perform appropriate equipment calibrations. BRPT DOMAIN 2 TASK B
 - i. Describe and demonstrate the minimum requirements for audio/visual recording during PSG. BRPT DOMAIN 4 TASK B
 - j. Demonstrate the ability to interface an external oximeter/capnograph. BRPT DOMAIN 4 TASK B
4. Demonstrate the knowledge of procedural protocols for alternative therapies and studies.
- a. Multiple sleep latency test (MSLT) BRPT DOMAIN 2 TASK C3
 - b. Maintenance wakefulness test (MWT) BRPT DOMAIN 2 TASK C4
 - c. Home Sleep Apnea Testing (HSAT) BRPT DOMAIN 2 TASK C5
 - d. Actigraphy
 - e. Positive airway pressure administration and Titration BRPT DOMAIN 4 TASK A
 - f. Capnography BRPT DOMAIN 4 TASK B
 - g. Oral appliances BRPT DOMAIN 4 TASK C
 - h. Positional therapy BRPT DOMAIN 4 TASK C
 - i. Surgical options BRPT DOMAIN 4 TASK C

Course Number and Name:

PSG 2214 PSG Scoring & Analysis

Description:

This course provides an intermediate level of scoring and data analysis for polysomnographic testing. Students will learn the procedures necessary to generate and validate a report of the scoring of objective and subjective data obtained in a polysomnographic study.

Hour Breakdown:

Semester Credit	Lecture	Lab	Clock
4	4	0	60

Prerequisite:

PSG 1116- Introduction to Polysom; PSG 1113- Polysom Pathophysiology; PSG 1123- Polysom Technology

Student Learning Outcomes:

1. Identify and demonstrate general scoring skills.
 - a. Demonstrate the ability to identify characteristic waveforms of sleep, wakefulness, and artifact.
 - b. Identify the need for manual review of all computerized scoring.
2. Prepare and demonstrate the acquisition system.
 - a. Define the AASM recommended recording parameters for standard PSG.^{BRPT DOMAIN 3}
 - b. Define and demonstrate bipolar and referential montages.^{BRPT DOMAIN 2 TASK A ii}
 - c. Describe routine montages (PSG, MSLT, MWT, PSG with PAP, seizure, parasomnia) and modifications for specific montage types (i.e. additional EEG leads for seizure montage).^{BRPT DOMAIN 2 TASK A ii, BRPT DOMAIN 2 TASK C}
 - d. Define and demonstrate the principles related to desirable and minimum sampling rates for various signals.^{BRPT DOMAIN 2 TASK D5}
 - e. Define and demonstrate appropriate high and low frequency filter settings for various signals.^{BRPT DOMAIN 2 TASK D5}
 - f. Define and demonstrate appropriate sensitivity/gain settings for various signals.^{BRPT DOMAIN 2 TASK D5}
 - g. Understand the requirements of epoch display size.^{BRPT DOMAIN 2 TASK D5}
 - h. Demonstrate the ability to perform appropriate equipment calibrations.^{BRPT DOMAIN 2 TASK B}
 - i. Describe and demonstrate the minimum requirements for audio/visual recording during PSG.^{BRPT DOMAIN 2 TASK B}
 - j. Demonstrate the ability to interface an external oximeter/capnograph.^{BRPT DOMAIN 4 TASK B}
3. Comprehend and demonstrate all scoring rules.
 - a. Demonstrate the ability to identify and apply AASM visual scoring rules.^{BRPT DOMAIN 3 TASK A-B}
 - b. Demonstrate the ability to identify and apply AASM arousal rules.^{BRPT DOMAIN 3 TASK A2 & TASK Bii}
 - c. Demonstrate the ability to identify respiratory events and apply AASM respiratory

- scoring rules. BRPT DOMAIN 3 TASK A3 & TASK Biii
- d. Demonstrate the ability to identify and apply AASM movement event rules. BRPT DOMAIN 3 TASK A5 & TASK Bv
 - e. Demonstrate the ability to identify and apply AASM cardiac scoring rules. BRPT DOMAIN 3 TASK A6 & TASK Bvi
4. Understand and demonstrate proper perimeters for report generation.
- a. Demonstrate ability to generate an accurate report that includes all AASM required parameters. BRPT DOMAIN 3
 - b. Demonstrate ability to verify report calculations. BRPT DOMAIN 3 TASK C1
 - c. Demonstrate ability to verify complete and accurate demographic information. BRPT DOMAIN 1 TASK A
 - d. Demonstrate ability to generate and verify accuracy of a hypnogram. BRPT DOMAIN 3 TASK C3
5. Demonstrate the use of the inter-scorer reliability format.
- a. Demonstrate the ability to maintain an epoch by epoch correlation of 85% or better with the reference scorer for sleep stages, arousals, respiratory events, and limb movements. BRPT DOMAIN 3 TASK A-B

Course Number and Name:

PSG 2218 Clinical Applications I

Description:

This introductory clinical course will have the students prepare patients for polysomnographic monitoring in the clinical setting. Emphasis will be placed on patient care and safety in the setting of a sleep laboratory, as well as preparation and initiation of routine polysomnographic testing in patients of all ages. The student will begin the experience of off-campus practicum at local sleep centers. This will provide the students with an environment that will encourage professional role development and clinical problem-solving skills.

Hour Breakdown:

Semester Credit	Lecture	Clinical	Clock
8	0	24	1080

Prerequisite:

PSG 1116- Introduction to Polysom; PSG 1113- Polysom Pathophysiology; PSG 1123- Polysom Technology

Student Learning Outcomes:

1. Utilize age specific guidelines to care and evaluate patients.
 - a. Provide information and instruction to the patient (parent/guardian, pediatric, adolescent, adult, geriatric and/or caregiver) appropriate for full understanding of the procedure. BRPT DOMAIN 1 TASK Av
 - b. Allow the patient (and the parent, guardian, caregiver, if applicable) to prepare for the sleep study; interact appropriately with the patient and family members. BRPT DOMAIN 1 TASK Av
 - c. Access and incorporate the patient's life situations, home environment, responsibilities, religious and cultural background, and available resources into their care while in the sleep center. Make adjustments to recording montage, parameters, procedures, and documentation to accommodate age and health status. BRPT DOMAIN 1 TASK Av
 - d. Recognize physiological and psychological changes that affect care of the patient; provide for patient's physical needs during the sleep study. BRPT DOMAIN 1 TASK Av
 - e. Recognize physical/psychological indicators of abuse/neglect and notify appropriate authorities.
 - f. Apply age appropriate safety measures.
2. Demonstrate use of pulse oximeters.
 - a. Demonstrate knowledge of operation of pulse oximeter devices; ability to adjust sampling rate/trend settings. BRPT DOMAIN 2 TASK Ai
 - b. Demonstrate ability to calibrate pulse oximeter device to polygraph as appropriate to acquisition equipment. BRPT DOMAIN 2 TASK Bii
 - c. Explain the use of pulse oximetry to patient during pre-testing

- procedure; utilize communication skills appropriate to patient age and physical/mental abilities. BRPT DOMAIN 1 TASK Av, COA PSG C1a
- d. Demonstrate ability to appropriately apply reusable or disposable pulse oximeter sensor allowing for patient comfort, compliance, and accurate data acquisition. BRPT DOMAIN 2 TASK Ai
 - e. Demonstrate ability to recognize when improper sensor placement is affecting oximeter reading. BRPT DOMAIN 2 TASK Ai
 - f. Identify the limitations of the patient monitoring device; recognize artifact in pulse rate and/or oximetry reading during procedure. BRPT DOMAIN 2 TASK A vi
 - g. Recognize and document low baseline saturation levels during procedure. COA PSG C1a
 - h. Recognize and demonstrate desaturation related to respiratory and other events; identify and document corresponding event characteristics (i.e., respiratory, cardiac, sleep state, etc.) during procedure. COA PSG C1a, BRPT DOMAIN 3 TASK A & TASK B
 - i. Verify the accuracy of pulse oximetry reading obtained during NREM and REM sleep. BRPT DOMAIN 3 TASK A & TASK B
 - j. Document oxygen saturation levels during PSG on polygraph and technical note forms. COA PSG C1a
3. Orient patient to the diagnostic procedure and safety issues.
 - a. Explain procedure to patient in an age appropriate manner. COA PSG C1a, BRPT DOMAIN 1 TASK Av
 - b. Identify impact of patient's physical/mental limitations on the outcome of the procedure.
 - c. Verbalize protocol for contacting the Medical Director. COA PSG C1a
 - d. Identify when to use supplemental oxygen due to low oxygen saturation levels. BRPT DOMAIN 2 TASK A vi
 - e. Demonstrate knowledge of possible side effects of supplemental oxygen therapy.
 - f. Identify signs that patient's drive to breathe is diminished and corrective actions that need to be implemented if patient's drive to breathe is affected.
 - g. Verify optimal supplemental oxygen level during all sleep stages. BRPT DOMAIN 3 TASK A4 & TASK Biv
 - h. Demonstrate knowledge of equipment maintenance procedures. BRPT DOMAIN 2 TASK Ai & TASK D3
 - i. Demonstrate handling, cleanup, and storage of hazardous materials (ex. Collodion) BRPT DOMAIN 2 TASK Ai
 4. Illustrate standard infection control precautions, equipment disinfection, and environmental cleaning procedures.
 - a. Demonstrate appropriate cleaning and disinfection of permanent interface devices. BRPT DOMAIN 2 TASK Ai, COA PSG C1i
 - b. Demonstrate proper disposal of single patient use nasal cannulas, oxygen tubing, and/or oxygen masks. BRPT DOMAIN 2 TASK Ai, COA PSG C1i
 - c. Demonstrate knowledge of appropriate cleaning and disinfection of non-disposable items and disposal of single use sensors. BRPT DOMAIN 2 TASK Ai, COA PSG C1i
 - d. Demonstrate appropriate procedures for cleaning reusable devices used during oxygen titration. BRPT DOMAIN 2 TASK Ai, COA PSG C1i
 - e. Demonstrate standard hand washing. COA PSG C1i
 - f. Demonstrate proper disinfection of hard surfaces within patient environment and technologist control room. COA PSG C1i
 - g. Remove soiled linen and replace with clean linen. COA PSG C1i

5. Demonstrate appropriate patient assessment, application of oxygen, titration, and documentation.
 - a. Review the patient's history and physical and physician orders to determine the need for supplemental oxygen. BRPT DOMAIN 1 TASK A i-ii
 - b. Assess patient's need for supplemental oxygen upon arrival in the sleep center using an oximeter. BRPT DOMAIN 1 TASK A vi
 - c. Assess patient's need for supplemental oxygen during polysomnography using an oximeter. BRPT DOMAIN 3 TASK A4 & TASK B4
 - d. Validate accuracy of oximeter reading. BRPT DOMAIN 2 TASK Bii
 - e. Verify correct function of oxygen concentrator and/or flow meter. BRPT DOMAIN 2 TASK Bii
 - f. Describe routine maintenance of device filters. BRPT DOMAIN 2 TASK Bii
 - g. Demonstrate ability to regulate oxygen flow. BRPT DOMAIN 2 TASK Bii
 - h. Demonstrate ability to fit and adjust a nasal cannula for oxygen delivery. BRPT DOMAIN 2 TASK Bii
 - i. Demonstrate ability to entrain supplemental oxygen in PAP circuit, with and without humidification devices. BRPT DOMAIN 2 TASK Bii
 - j. Identify when to adjust supplemental oxygen to achieve optimal saturation level according to facility protocol. BRPT DOMAIN 2 TASK Bii
 - k. Identify events (i.e., respiratory desaturations that do not respond to PAP therapy, cardiac, sleep stage, etc.) indicating a need to implement supplemental oxygen. BRPT DOMAIN 3 TASK A-B, BRPT DOMAIN 4 TASK B
 - l. Identify when to add supplemental oxygen therapy during PAP therapy according to facility protocol. BRPT DOMAIN 3 TASK A-B, BRPT DOMAIN 4 TASK B
 - m. Document changes in oxygen levels during PSG in the sleep system and on technical note forms. COA PSG C1a, BRPT DOMAIN 3 TASK C2
 - n. Identify, document, and correct equipment problems. COA PSG C1a, BRPT DOMAIN 2 TASK D3

Course Number and Name: PSG 2227 Clinical Applications II

Description: This advanced clinical course will have the students apply previously learned theoretical concepts and skills in Polysomnography, to include advanced PAP titration. Emphasis will be placed on patient care and safety, as well as preparation, initiation and completion of routine polysomnographic testing in patients of all ages. The student will continue the experience of off-campus practicum at local sleep centers. This will provide the students with an environment that will encourage professional role development and clinical problem-solving skills.

Hour Breakdown:

Semester Credit	Lecture	Clinical	Clock Hours
7	0	21	945

Prerequisite: PSG 1116- Introduction to Polysom; PSG 1113- Polysom Pathophysiology; PSG 1123- Polysom Technology; PSG 2214- PSG Scoring and Analysis; PSG2218- Clinical Application I

Student Learning Outcomes:

1. Demonstrate use of PAP equipment operation.
 - a. Demonstrate knowledge of operation of all PAP and humidification devices within the center; and proper equipment function. BRPT DOMAIN 4 TASK A, BRPT DOMAIN 1 TASK Cii
 - b. Demonstrate knowledge of PAP-PSG equipment interfaces and remote operation of PAP devices. BRPT DOMAIN 4 TASK A, BRPT DOMAIN 1 TASK Cii
 - c. Demonstrate knowledge of appropriate use of an auto-titrating PAP device in the sleep center. BRPT DOMAIN 4 TASK A
 - d. Demonstrate knowledge of sleep center PAP titration protocols. BRPT DOMAIN 4 TASK A, BRPT DOMAIN 1 TASK Cii
 - e. Demonstrate ability to properly fit a PAP mask or other interface that meets patient needs for optimum comfort and compliance. BRPT DOMAIN 4 TASK A4, BRPT DOMAIN 1 TASK Ci-ii
 - f. Adjust and fit appropriate headgear. BRPT DOMAIN 4 TASK A4, BRPT DOMAIN 1 TASK Cii
2. Orient patient to PAP procedure.
 - a. Explain PAP titration procedure to patient demonstrating appropriate age-specific communication skills. BRPT DOMAIN 1 TASK Av, COA PSG C1a
 - b. Identify the impact of the patient's age and physical/mental limitations on the outcome of the procedure. BRPT DOMAIN 4 TASK A3, BRPT DOMAIN 1 TASK Ciii
 - c. Respond to patient questions or concerns. COA PSG C1a, BRPT DOMAIN 1 TASK Av
3. Demonstrate proper PAP titration and appropriate documentation.
 - a. Demonstrate knowledge of possible complications and side effects of PAP therapy. BRPT DOMAIN 4 TASK A 6, BRPT DOMAIN 1 TASK Cii
 - b. Recognize when a patient is unable to tolerate PAP therapy. BRPT DOMAIN 4 TASK A 6, BRPT

DOMAIN 1 TASK Cii

- c. Demonstrate ability to identify excessive volume leakage related to mouth breathing or mask leak and make appropriate interventions. BRPT DOMAIN 4 TASK A 5, BRPT DOMAIN 1 TASK Cii
 - d. Identify and document clinical events and causes (i.e. respiratory, arousals, cardiac events.) BRPT DOMAIN 3 TASK A 2-6 & TASK B 2-6, COA PSG C1a
 - e. Identify and document sleep fragmentation related to respiratory events and snoring. COA PSG C1a, BRPT DOMAIN 2 TASK D4
 - f. Identify and document when to adjust PAP to achieve optimal therapeutic level (i.e. eliminate respiratory events, desaturation, arousals and snoring). BRPT DOMAIN 4 TASK A 1-3, BRPT DOMAIN 1 TASK Cii, COA PSG C1a
 - g. Identify and document event characteristics demonstrating a need to change PAP mode. COA PSG C1a, BRPT DOMAIN 1 TASK Cii
 - h. Identify when to discontinue PAP therapy due to complications or patient intolerance. BRPT DOMAIN 4 TASK A6, BRPT DOMAIN 1 TASK Cii
 - i. Verbalize the protocol for contacting the Facility Director. COA PSG C1a
 - j. Verify and document optimal pressure during supine and stage R sleep. COA PSG C1a, BRPT DOMAIN 4 TASK A 1-2, BRPT DOMAIN 1 TASK Cii
 - k. Document the epoch number/time of each PAP pressure change appropriately in the recording. COA PSG C1a
 - l. Document reasons for all changes in PAP levels or other settings during the PSG. COA PSG C1a, BRPT DOMAIN 3 TASK C2
 - m. Document a summary of the titration on the recording or technical note form. COA PSG C1a, BRPT DOMAIN 3 TASK C2
 - n. Identify, document, and correct equipment problems. COA PSG C1a, BRPT DOMAIN 2 TASK D3
4. Illustrate standard infection control precautions, equipment disinfection, and environmental cleaning procedures.
- a. Demonstrate knowledge of equipment maintenance procedures. BRPT DOMAIN 2 TASK D3
 - b. Demonstrate knowledge of appropriate cleaning and disinfection of non-disposable items and disposal of single use sensors. COA PSG C1i
 - c. Demonstrate appropriate cleaning and disinfection of permanent interface devices. COA PSG C1i
 - d. Demonstrate proper disposal of single patient use nasal cannulas, oxygen tubing, and/or oxygen masks. COA PSG C1i
 - e. Demonstrate appropriate procedures for cleaning reusable devices used during oxygen titration. COA PSG C1i
 - f. Demonstrate standard hand washing. COA PSG C1i
 - g. Demonstrate proper disinfection of hard surfaces within patient environment and technologist control room. COA PSG C1i
 - h. Remove soiled linen and replace with clean linen. COA PSG C1i
5. Verbalize and demonstrate CO2 Monitoring.
- a. Demonstrate knowledge of the proper operation and calibration of EtCO2/TcCO2 device. BRPT DOMAIN 2 TASK Ai & TASK Bii
 - b. Demonstrate ability to identify equipment problems and to interface EtCO2/TcCO2 monitoring devices with the polygraph. BRPT DOMAIN 2 TASK D3
 - c. Demonstrate ability to fit nasal cannula for patient comfort and compliance. BRPT DOMAIN 2 TASK Bii
 - d. Demonstrate knowledge of appropriate sites for application of TcCO2 electrode and proper application of sensor. BRPT DOMAIN 2 TASK Aiv
 - e. Explain EtCO2/TcCO2 procedure to patient during pre-testing procedure; utilize

communication skills appropriate to patient age and physical/mental abilities.
COA PSG C1a, BRPT DOMAIN 1 TASK Av, BPRT DOMAIN 2 TASK Bii

- f. Describe basic theory of EtCO₂/TcCO₂ monitoring. COA PSG C1a, BRPT DOMAIN 2 TASK Bii
- g. Demonstrate knowledge of normal values for EtCO₂/TcCO₂ and factors that can affect observed values. BRPT DOMAIN 2 TASK Bii
- h. Document changes in EtCO₂/TcCO₂ noted during PSG on polygraph and in technical notes. COA PSG C1a, BRPT DOMAIN 3 TASK C2
- i. Identify when to change the TcCO₂ site based on electrode temperatures. BRPT DOMAIN 2 TASK Bii

Course Number and Name: PSG 2132 Professional Transition

Description: This course builds on previous knowledge and skills applicable to the practice of professional polysomnography. This course provides an overview of professional concepts basic to the development of professionalism in polysomnography. Emphasis will be placed on changes in the health care environment and the impact on the professional polysomnographer's role. Discuss with the students accountability and responsibility issues as they relate to professional polysomnography. The students will begin the development of a professional portfolio for use throughout the curriculum and in the professional practice settings.

Hour Breakdown:

Semester Credit	Lecture	Lab	Clock
2	2	0	30

Prerequisite: PSG 1116- Introduction to Polysom; PSG 1113- Polysom Pathophysiology; PSG 1123- Polysom Technology; PSG 2214- PSG Scoring and Analysis; PSG2218- Clinical Application I

Student Learning Outcome:

1. Demonstrate the ability to:
 - a. Develop a resume. COA PSG C1a
 - b. Develop a resignation letter. COA PSG C1a
 - c. Communicate professionally verbally and written. COA PSG C1a
 - d. Perform a successful phone interview. COA PSG C1a
 - e. Perform a successful panel interview. COA PSG C1a
 - f. Identify professional attire and behavior.
 - g. Develop a cover letter. COA PSG C1a
 - h. Perform a successful virtual interview. COA PSG C1a
 - i. Demonstrate proper grammar verbally and written. COA PSG C1a
 - j. Demonstrate proper time management.
 - k. Demonstrate proper Ethics and professionalism in sleep medicine. COA PSG C1f
 - l. Demonstrate the ability to complete job applications. COA PSG C1a

Course Number and Name: PSG 2224 Polysomnography Capstone

Description: This course is designed to apply the essential elements of polysomnography through the use of case studies. Students develop an analytical approach to problem solving. Review of curriculum, test taking skills, and prepare the student for the Registered Sleep Technologist and the Registered Polysomnographic Technologist exam.

Hour Breakdown:

Semester Credit	Lecture	Lab	Clock
4	4	0	60

Prerequisite: PSG 1116- Introduction to Polysom; PSG 1113- Polysom Pathophysiology; PSG 1123- Polysom Technology; PSG 2214- PSG Scoring and Analysis; PSG2218- Clinical Application I

Student Learning Outcomes:

1. Illustrate an understanding of the registry exams.
 - a. Exhibit understanding of BRPT blueprint BRPT DOMAIN 1-4
 - b. Exhibit comfort with computer testing. COA PSG C1c
 - c. Complete a mock Certified Polysomnographic Technology Exam and a mock Registered Polysomnographic Exam.
2. Produces unbiased evaluations on case studies.
 - a. Uses and demonstrates critical thinking skills while critiquing various case studies.
 - b. Verbalize findings with the class, giving specific examples of conclusions.
3. Demonstrate accurate scoring techniques.
 - a. Score the case studies, using the AASM scoring rules and definitions. BRPT DOMAIN 2 TASK C, BRPT DOMAIN 3 TASK A & B
 - b. Demonstrate scoring ability within at least 85%. BRPT DOMAIN 2 TASK C, BRPT DOMAIN 3 TASK A & B
4. Comprehend and demonstrate all scoring rules.
 - a. Demonstrate the ability to identify and apply AASM visual scoring rules. BRPT DOMAIN 3 TASK A & B
 - b. Demonstrate the ability to identify and apply AASM arousal rules. BRPT DOMAIN 3 TASK A2 & TASK Bii
 - c. Demonstrate the ability to identify respiratory events and apply AASM respiratory scoring rules. BRPT DOMAIN 3 TASK A3 & TASK Biii
 - d. Demonstrate the ability to identify and apply AASM movement event rules. BRPT DOMAIN 3 TASK A5 & TASK Bv

Course Number and Name:

PSG 291 (1-3) Special Project in Polysomnography

Description:

A course designed to provide the student with practical application of skills and knowledge gained in the courses. The instructor works closely with the student to insure that the selection of a project will enhance the student's learning experience.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	0	2-6	

Prerequisite:

Instructor approved

Student Learning Outcomes:

1. Develop a written plan which details the activities and projects to be completed.
 - a. Utilize a written plan which details the activities and projects to be done.
 - b. Perform written occupational objectives.
2. Assess accomplishment of objectives.
 - a. Prepare daily written assessment of accomplishment of objectives.
 - b. Present weekly written report to instructor on activities done.
3. Utilize a set of written guidelines for the special project.
 - a. Develop and follow a set of written guidelines.

Course Number and Name:

WBL I, II, III, III, IV, V, and VI
WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL
292(1-3), and WBL 293(1-3)

Description:

A structured work-site learning experience in which the student, program area teacher, Work-Based Learning Coordinator, and worksite supervisor/mentor develop and implement an educational training agreement. Designed to integrate the student's academic and technical skills into a work environment. May include regular meetings and seminars with school personnel and employers for supplemental instruction and progress reviews.

Hour Breakdown:

Semester Credit Hours	Lecture	Externship	Contact Hours
1-3	0	3-9	

Prerequisite:

Instructor approved

Student Learning Outcomes:

1. Apply technical skills and related academic knowledge needed to be a viable member of the workforce.
 - a. Demonstrate technical skills necessary to complete job requirements.
 - b. Demonstrate academic skills necessary to complete job requirements.
 - c. Perform tasks detailed in an educational training agreement at the work setting.
2. Apply general workplace skills to include positive work habits necessary for successful employment.
 - a. Demonstrate appropriate human relationship skills in the work setting to include conflict resolution, team participation, leadership, negotiation, and customer/client service.
 - b. Utilize time, materials, and resource management skills.
 - c. Use critical thinking skills such as problem solving, decision making, and reasoning.
 - d. Acquire, evaluate, organize, maintain, interpret, and communicate information.

Business office Technology Course

The standards used to create this curriculum document can be found in the following documents on the Mississippi Community College Board website: <http://www.mccb.edu/OCI/currdownload.aspx>

Business Technology Mississippi Curriculum Framework

Health-care Data Technology (Program CIP: 51.0799 – Medical Administrative Services)

Appendix A: RECOMMENDED TOOLS AND EQUIPMENT

Capitalized Items

Access to some tools and equipment may be provided by Polysomnographic Technology Program facilities.

1. Emergency eyewash station (1)
2. Student computers with Internet access (20)
3. Printers (3)
4. Copy machine (1)
5. Polysomnography diagnostic software with infrared light and camera (i.e. SomnoStar, Alice, Grass, Cadwell) (4)
6. Desk top computer for laboratory (4)
7. Pulse oximeter monitor (4)
8. CPAP machine with humidifier (4)
9. Bed (4)
10. Bedside table (4)
11. Washing machine (1)
12. Dryer (1)
13. Portable monitor (2)
14. Actigraph
15. Air purifier (1)
16. Equipment dryer (1)
17. Oral appliance (1)
18. Two way audio monitoring system (4)
19. Scale (1)
20. Water column manometer (1)

Non-Capitalized Items

1. First aid kit (1)
2. Electrodes (150)
3. Gold Cups Electrodes (250)
4. Pressure transducer (5)
5. Airflow sensor (5)
6. Snore sensor (5)
7. Respiratory effort sensor (10)
8. I.V. poles (4)
9. Instrument stand/chart (4)
10. CPAP Mask (30-variety)
11. CPAP tubing (8)
12. Glass head (20)
13. Wire tester (1)
14. Air pump (2)
15. Safety/ Fire proof cabinet (1)
16. Bedding (8 sets)
17. T connector (5)
18. Chin Strap (10-variety)
19. Noise canceling machine (4)

20. Utility cart (1)
21. Blood pressure monitor (2)
22. Snap electrodes (150)
23. Oxygen concentrator(1)

Recommended Instructional Aids

It is recommended that instructors have access to the following items:

1. TV monitor, 25-in. color (1 per program)
2. DVD/Blu ray player (1 per program)
3. overhead projector (1 per program)
4. Projector screen (1 per program)
5. Data projector (1 per program)
6. Teacher computer with printer (2 per program)
7. White board (1 per program)
8. Mock PSG Exams
9. Online access to textbooks
10. Additional instructor aids included with textbooks
11. Standardized testing system to compile and administer tests and quizzes (1)
12. Educational pamphlets (variety)

*Other equipment items can be added when deemed appropriate by the community college industry craft committee or by industry/business training requirements.

Appendix B CURRICULUM DEFINITIONS AND TERMS

- Course Name – A common name that will be used by all community colleges in reporting students
- Course Abbreviation – A common abbreviation that will be used by all community and junior colleges in reporting students
- Classification – Courses may be classified as the following:
 - Career Certificate Required Course – A required course for all students completing a career certificate.
 - Technical Certificate Required Course – A required course for all students completing a technical certificate.
 - Technical Elective – Elective courses that are available for colleges to offer to students.
- Description – A short narrative that includes the major purpose(s) of the course
- Prerequisites – A listing of any courses that must be taken prior to or on enrollment in the course
- Co-requisites – A listing of courses that may be taken while enrolled in the course
- Student Learning Outcomes – A listing of the student outcomes (major concepts and performances) that will enable students to demonstrate mastery of these competencies

The following guidelines were used in developing the program(s) in this document and should be considered in compiling and revising course syllabi and daily lesson plans at the local level:

- The content of the courses in this document reflects approximately 75% of the time allocated to each course. The remaining 25% of each course should be developed at the local district level and may reflect the following:
 - Additional competencies and objectives within the course related to topics not found in the state framework, including activities related to specific needs of industries in the community college district
 - Activities that develop a higher level of mastery on the existing competencies and suggested objectives
 - Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework was developed or revised
 - Activities that include integration of academic and career–technical skills and course work, school-to-work transition activities, and articulation of secondary and postsecondary career–technical programs
 - Individualized learning activities, including work-site learning activities, to better prepare individuals in the courses for their chosen occupational areas
- Sequencing of the course within a program is left to the discretion of the local college. Naturally, foundation courses related to topics such as safety, tool and equipment usage, and other fundamental skills should be taught first. Other courses related to specific skill areas and related academics, however, may be

sequenced to take advantage of seasonal and climatic conditions, resources located outside of the school, and other factors. Programs that offer an Associate of Applied Science Degree must include all of the required Career Certificate courses, Technical Certificate courses **AND** a minimum of 15 semester hours of General Education Core Courses. The courses in the General Education Core may be spaced out over the entire length of the program so that students complete some academic and Career Technical courses each semester. Each community college specifies the actual courses that are required to meet the General Education Core Requirements for the Associate of Applied Science Degree at their college.

- In order to provide flexibility within the districts, individual courses within a framework may be customized by doing the following:
 - Adding new student learning outcomes to complement the existing competencies and suggested objectives in the program framework.
 - Revising or extending the student learning outcomes
 - Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the Mississippi Community College Board [MCCB] of the change)

Appendix C: Recommended Textbook List

Recommended Textbook List CIP 51.0917 – Polysomnography		
Book Title	Author (s)	ISBN
Essentials of Polysomnography 3 rd Edition	Spriggs, William	978-1284172218
Fundamentals of Sleep Technology 3 rd Edition	Mattice, Brooks, Lee-Chiong	978-1975111625
Fundamentals of Sleep Technnology Workbook	Brooks, Mattice, Lee-Chiong	987654321
Fundamentals of Sleep Medicine	Berry	978-1-4377-0326-9
Essentials of Sleep Technology <ul style="list-style-type: none"> • A Technologist's Handbook for Understanding and Implementing the AASM Manual for the Scoring of Sleep and Associated Events • A Technologist's Guide to Performing Sleep Studies • A Technologist's Introduction to Sleep Disorders 	Rosenberg AASM	
International Classification of Sleep Disorders, 3 rd Edition	AASM	978-0-9915434-1-0
Case Book of Sleep Medicine, 3 rd Edition	AASM	978-0-9657220-4-9

Appendix D: Course Crosswalk

Course Crosswalk CIP 01.0601 – Horticulture Service Operations and Management CIP 51.0917					
<i>Note: Courses that have been added or changed in the 2022 curriculum are highlighted.</i>					
Existing			Revised		
2010 MS Curriculum Framework			2022 MS Curriculum Framework		
			BOT 1613	Medical Terminology	3
BIO 2513	*Anatomy & Physiology I	3	BIO 2513	*Anatomy & Physiology I	3
BIO 2511	*Anatomy & Physiology Lab	1	BIO 2511	*Anatomy & Physiology Lab	1
BIO 2523	*Anatomy & Physiology II	3			
BIO 2521	*Anatomy & Physiology Lab II	1			
PSG 1116	Introduction to Polysom	6	PSG 1116	Introduction to Polysom	6
PSG 1113	Polysom Pathophysiology	3	PSG 1113	Polysom Pathophysiology	3
PSG 1123	Polysom Technology	3	PSG 1123	Polysom Technology	3
PSG 2214	PSG Scoring and Analysis	4	PSG 2214	PSG Scoring and Analysis	4
PSG 2218	Clinical Application I	8	PSG 2218	Clinical Application I	8
PSG 2132	Professional Transitions	2	PSG 2132	Professional Transitions	2
PSG 2224	PSG Capstone	4	PSG 2224	PSG Capstone	4
PSG 2227	Clinical Application II	7	PSG 2227	Clinical Application II	7
			WBL I, II, III, IV, V, and VI WBL 191(1-3), WBL 192(1-3), WBL 193(1-3), WBL 291(1-3), WBL 292(1-3), and WBL 293(1-3)	Work Based Learning	1-3
			PSG 291 (1-3)	Special Project in Polysomnography	1-3