

A.A.S. in Polysomnographic
Technology (PSG) program
at Kingsborough Community
College (KBCC)

Career Description

Sleep Technology, also called Polysomnographic Technology, is a separate and distinct allied health-care occupation embracing a unique body of knowledge and methodological skills. Overnight polysomnography is a standard tool in Sleep Medicine for evaluating sleep-related pathophysiology, sleep architecture, and sleep integrity. Specifically, it is an evaluation of multiple physiological parameters during sleep, combined with expert observational reporting. Sleep technologists are the technical group specially trained to perform polysomnography and other technical evaluations used for the diagnosis and treatment of sleep/arousal disorders. They are health-care professionals who work as part of a team under the general supervision of a licensed physician to assist in the education, evaluation, treatment and follow-up of sleep disorders in patients of all ages. They follow accepted standards of care, including American Academy of Sleep Medicine (AASM) Practice Parameters, which are the foundation for clinical/technical decision-making and for the provision of patient-sensitive care. This

profession employs a unique set of diagnostic tools used in the interest of establishing diagnoses and implementing therapeutic interventions. Salary.com estimates the salary for a sleep technologist in New York City ranges from \$44,410 (10th percentile) to \$70,176 (90th percentile), with a median of \$56,866.

Working as a sleep technologist is ideal for many college students looking for a career that will allow them to pursue further education, as most sleep laboratories require a full-time technologist to work three-12 hours shifts per week. This type of schedule allows the technologist excellent flexibility to take daytime coursework. It also provides an income to support independent living in New York City while paying for tuition at a senior CUNY college. Others not interested in further education will also like the flexibility of working three-nights per week, which allows them to spend more time with family; this is particularly useful for single parents.

Admission Requirements

Requirements for admission into this program include successful completion of all CUNY reading, writing and math exams or successful completion of appropriate developmental courses. Additional requirements for admission into this program include passing a background check and receiving medical clearance. Before the start of the second year in the program students will also be required to receive basic life support (BLS) certification from the American Heart Association.

In the semester in which the student is registered for PSG 100 (see below for more information on coursework), the student must also be registered for ENG 12 and BIO 11 (or have already taken both).

Additional admission requirements include:

- Must be at least 18 years of age by the start of the first clinical practicum
- Pass a criminal background check
- High school diploma, GED or equivalent education
- Must be able to work 12-hour night shifts
- Ability to communicate effectively with patients
- Ability to interpret oral, written and diagnostic form instructions
- Ability to use good judgment and remain calm in high stress situations
- Ability to function efficiently without interruption throughout an entire work shift
- Ability to converse, in English, with coworkers and hospital staff with regard to the status of the patient
- Possess good manual dexterity with ability to perform all tasks related to the highest quality patient care
- Ability to work in low light situations
- Ability to work with other providers to make appropriate patient care decisions

In order to receive an AAS in Polysomnographic Technology, a student must complete the following courses with a grade of "c" or better:

- ENG 12, ENG 24, BIO 11, BIO 12, MAT 9, MAT 20, PSY 11, PHI 76
- PSG 100, PSG 101, PSG 102, PSG 103, PSG 104, PSG 105, PSG 106, PSG 107, PSG 108

An interview with the Program Director is also required.

The PSG program accepts new students only in the spring semester.

Please see the following link to see the KBCC academic calendar: <https://goo.gl/JO5i6b>

Of note, if a student has already completed college credit, past performance in courses required by the PSG program will be used, in part, to evaluate the students' acceptance into the PSG program. Students who have demonstrated exceptional performance in required core courses such as MAT 9, BIO 11 and ENG 12 may be given preferential acceptance into the PSG program over students who have not completed college level courses.

Degree Requirements

A.A.S. Polysomnographic Technology Curriculum Outline | TOTAL DEGREE CREDITS: 60

MAJOR COMPONENT

Course number		Lecture	Lab	Clinic	Credit
PSG 100	The Science of Sleep and Circadian Rhythms	3			3
PSG 101	Neuroscience and Pharmacology in Sleep	4			4
PSG 102	Foundations of Polysomnography I	2	2		3
PSG 103	Clinical Practicum in Sleep Medicine I			24	6
PSG 104	Foundations of Polysomnography II	2	2		3
PSG 105	Clinical Polysomnographic Scoring	2	2		3
PSG 106	Classification of Sleep Disorders	3			3
PSG 107	Cardiopulmonary Physiology in Sleep	3			3
PSG 108	Clinical Practicum in Sleep Medicine II			24	6

Total Credits: 34

GENERAL EDUCATION COMPONENT OF THE POLYSOMNOGRAPHIC TECHNOLOGY CURRICULUM

Course number		Lecture	Lab	Clinic	Credit
ENG 12	Freshman English I	3			3
ENG 24	Freshman English II	3			3
BIO 11	Human Anatomy and Physiology I	2	4		4
BIO 12	Human Anatomy and Physiology II	2	4		4
PSY 11	General Psychology	3			3
MAT 9	College Algebra	3			3
MAT 20	Elements of Statistics	3			3
PHI 76	Ethics and Morality in the Health Professions	3			3

Total Credits: 26

Description of Required Sleep Related Courses

PSG 100 | The Science of Sleep and Circadian Rhythms | (3-Credits) – 3 hrs lec

This course is designed to provide students with the biological basis for clinical sleep and circadian rhythms disorders. Students will be introduced to the history of sleep research, and current theories regarding how and why we sleep. Daily biological rhythms, and their relationship to sleep and wake states will also be investigated in this course.

PSG 101 | Neuroscience and Pharmacology in Sleep | (4-Credits) - 4 hrs lec

This course will inform students of the neurological basis of sleep. The anatomical brain regions responsible for sleep and waking, as well as endogenous neurochemicals modulating sleep and wake will be discussed. In the second half of this course, the effects of pharmacological compounds on sleep architecture is described.

PSG 102 | Foundations of Polysomnography I (3-Credits) – 2 hrs lec, 2 hrs lab

In this course students will be taught the basic skills required to perform a clinical sleep study. Including electrode placement using the international 10-20 system. How to use respiratory belts, pressure transducers, thermistors, pulse-oximetry, end tidal capnography, and electromyography during a sleep recording. Use of polysomnographic equipment, including amplifier settings, inputting patient data, and setting up basic recording montages are also covered.

PSG 103 | Clinical Practicum in Sleep Medicine I | (6-Credits) – 24 hrs clinical

Students will be placed in an active clinical sleep laboratory for the entire semester. Two nights per week the student will observe a registered polysomnographic technologist at work. As the student becomes familiar with the workings of the laboratory, they will begin preparing patients for nighttime sleep studies, and will learn how to monitor patients during the night.

PSG 104 | Foundations of Polysomnography II (3-Credits) – 2 hrs lec, 2 hrs lab

Advanced topics for clinical sleep recordings will be covered in this course. Including how to perform Multiple Sleep Latency (MSLT) and Maintenance of Wakefulness (MWT) testing. Montages for special patient populations such as for seizure, REM behavior disorder, bruxism, and pediatrics. Identification of both physiological and non-physiological electrical artifact commonly seen while performing polysomnography, as well as advanced trouble shooting of technical equipment will also be covered.

PSG 105 | Clinical Polysomnographic Scoring (3-Credits) – 2 hr lec, 2 hr lab

Students will learn to define sleep stages, respiratory events, periodic limb movements, seizures, bruxism, and EKG arrhythmias from electrophysiological data obtain during a polysomnographic recording. At the end of this course, students should be able to properly score a polysomnographic based on the criteria described in the American Academy of Sleep Medicine Manual for the Scoring of Sleep and Associated Events.

PSG 106 | Classification of Sleep Disorders (3-Credits) – 3 hrs lec

The focus of this course is to give students a complete understanding of the nosology of clinical sleep and circadian rhythms disorders from the perspective of the International Classification of Sleep Disorders Diagnostic & Coding Manual. Upon completion of this course, students should know the diagnostic criteria of all major sleep and circadian rhythm disorders.

PSG 107 | Cardiopulmonary Physiology in Sleep | (3-Credits) – 3 hrs lec

The physiology of normal respiratory function during sleep, as well as our current understanding of the pathophysiology of obstructive and central apneas during sleep is described. Acute and long-term consequences of sleep apnea, as well as cardiac function and dysfunction with a specific focus on arrhythmias commonly associated with sleep-disordered breathing is investigated.

PSG 108 | Clinical Practicum in Sleep Medicine II | (6-Credits) – 24 hrs clinical

As in the Clinical Practicum in Sleep Medicine I, students in this course will spend a semester observing and working in a clinical sleep laboratory. During this semester students will focus on learning to titrate patients with positive airway pressure machines including CPAP, BiPAP and ASV. Titration of supplemental oxygen will also be taught. Real time obstructive and central sleep apnea and hypopnea, and EKG arrhythmia detection will be an area of particular focus. Students will also gain experience performing MSLT and MWT testing.

Recommended Full-Time (4-Semester) Program of Study

SPRING-FIRST YEAR

Course number		Credit
ENG 12	Freshman English I	3
BIO 11	Human Anatomy and Physiology I	4
MAT 9	College Algebra	3
PSY 11	General Psychology (Fall or Winter)	3
PSG 100	The Science of Sleep and Circadian Rhythms	3

Total Credits: 16

FALL-FIRST YEAR

Course number		Credit
ENG 24	Freshman English II (Spring or Summer)	3
MAT 20	Elements of Statistics	3
BIO 12	Human Anatomy and Physiology II	4
PSG 101	Neuroscience and Pharmacology in Sleep	4
PSG 102	Foundations of Polysomnography I	3

Total Credits: 17

SPRING-SECOND YEAR

Course number		Credit
PSG 103	Clinical Practicum in Sleep Medicine I	6
PSG 104	Foundations of Polysomnography II	3
PSG 105	Clinical Polysomnographic Scoring	3
PSG 106	Classification of Sleep Disorders (Winter)	3

Total Credits: 15

FALL-SECOND YEAR

Course number		Credit
PSG 107	Cardiopulmonary Physiology in Sleep	3
PHI 76	Ethics and Morality in the Health Professions	3
PSG 108	Clinical Practicum in Sleep Medicine II	6

Total Credits: 12

Credits for Experiential Learning

Requirements for service credit for the Polysomnography Technology A.A.S. program:

Technologists that currently hold the RPSG.T or RST credential, and can document at least two-years of work experience in an AASM accredited sleep laboratory are eligible to receive credit for their work experience.

The following courses are eligible for this credit:

- PSG 102 Foundations of Polysomnography I- 3-credits
- PSG 104 Foundations of Polysomnography II- 3-credits
- PSG 103 Clinical Practicum in Sleep Medicine I- 6-credits
- PSG 108 Clinical Practicum in Sleep Medicine II- 6-credits

Transfer Credits

Transfer credits from other educational institutions are evaluated by the registrar's office. You must request an official transcript from your previous college to be sent to KBCC. Once your official transcript(s) is received, the Registrar's Office will conduct an official evaluation of your credits and send you a pink copy of the Advanced Standing form in the mail.

The credits that are accepted are determined based on the requirements of the major you have declared at Kingsborough.

Kingsborough accepts a maximum of 30 credits from other accredited institutions, provided that

- Each course was completed with a satisfactory grade ("c" or better from non-CUNY schools, "d" or better from CUNY schools). However, only courses receiving a grade of "c" or higher can be used to satisfy requirements for the PSG program.
- The course content is equivalent to a Kingsborough course
- The course satisfies the student's graduation requirements. Students must complete at least 30 additional credits at Kingsborough to earn their degree.

In addition, students can see a Transfer Advisor in M-101 to determine which specific courses are required to complete their degree.

Advanced Placement Credits

The college awards advanced standing credit through sources like the Advanced Placement Examinations (AP Exam) of the Educational Testing Service and the College-Level Examination Program (CLEP) of the College Entrance Examination Board, when the matriculated student has met all the pre-requisites for that course.

KBCC will exempt or award no more than two courses based on these exams and the credit awarded will count towards the transfer credit maximum of 30 credits. CUNY has determined that the passing score for AP exams is 4 or better. Students requesting transfer credit should contact the Registrar's Office, Room A-101.

Process to Withdrawal From Courses

A course withdrawal form (obtained from the registrar's office-room A101) must be signed by the professor, a counselor in room C102, and financial aid in U201 in order to withdraw from a course at KBCC. The completed form must be returned to room - A101. This form must be submitted by the official withdrawal date, which varies by semester. Consult the current college calendar for the date. Students that do not officially withdraw from a course by completing the above steps are usually issued a **WU** by their professor.

Tuition / Fees

Please see the following website for the latest information on tuition rates and fees as well as the tuition refund schedule based on the date of withdrawal:

<https://goo.gl/090Fex>

At the time of this writing the current tuition rate is \$2,400 per semester for New York residents (\$320/credit for non-residents). Additional CUNY fees amount to approximately \$250.00 per semester. The program is designed to be completed in 4-semesters. Students are also responsible for the cost of Basic Life Support training, a background check, books, and a medical clearance exam in the second year of training.

Retention Criteria

Criteria for retention in the polysomnographic technology program mandates that students:

- Receive no more than two grades below “C” in any of the general education pre-requisite courses.
- Earn a minimum of a “C” grade in all polysomnographic technology (PSG) courses.
- A student earning less than a “C” grade in a PSG course may repeat the course one time (subject to space availability) and must earn at least a grade of “C” in the repeated course.
- Earning a grade of less than “C” in any repeated PSG course will lead to termination from PSG program.

Any student who has not attended PSG courses for two or more consecutive semesters cannot be readmitted into the PSG program unless qualifying examinations have been passed in sequential order of the courses previously completed. These qualifying examinations can be repeated only once. In addition, the student must demonstrate clinical competency by passing a clinical practical examination prior to returning to any of the clinical courses.

Articulation Agreement

The PSG program at KBCC has a formal articulation agreement with the New York College of Technology - CUNY for students interested in pursuing a Bachelor of Science degree in Health Services Administration. Please follow this link for more information on this agreement: <https://goo.gl/5R4U2j>

Accreditation Status

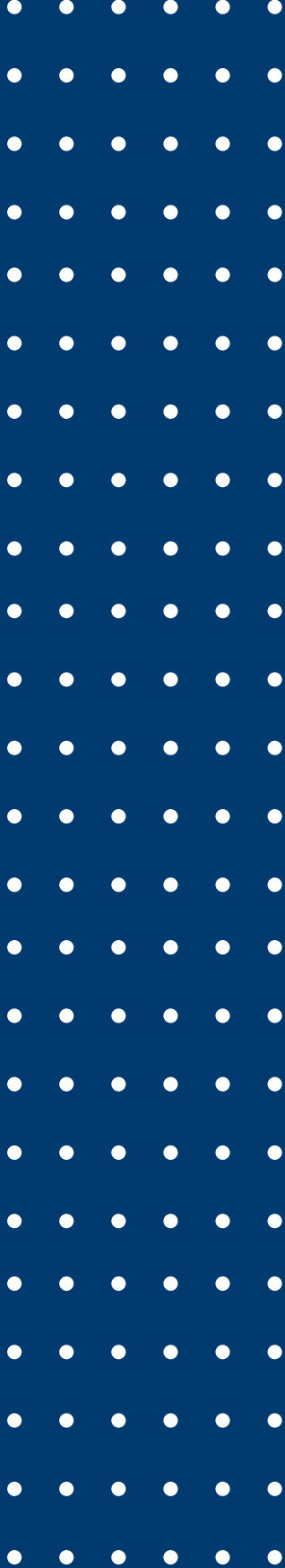
Kingsborough community college is accredited by the Middle States Commission on Higher Education (3624 Market Street. Philadelphia, PA 19104. Main Phone Number (267) 284–5000, Fax (215) 662–5501).

The PSG program at KBCC is a New York State license eligible program to train polysomnographic technologists (New York State Education Department, 89 Washington Avenue. Albany, New York 12234. Phone number (518) 474-3852).

CoA PSG accreditation is pending (CoA PSG office, 1711 Frank Ave. New Bern, NC 28560. Main phone number (252) 626-3238).

Contact Information

Contact Dr. Matthew R. Ebben at matt.ebben@kbcc.cuny.edu or 646-729-6879 for more information regarding the PSG program.



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