

BOARD OF HIGHER EDUCATION
REQUEST FOR COMMITTEE AND BOARD ACTION

COMMITTEE: Assessment and Accountability **NO.:** AAC 09-06

COMMITTEE DATE: January 30, 2009

BOARD DATE: February 5, 2009

MASSASOIT COMMUNITY COLLEGE
ASSOCIATE IN SCIENCE IN POLYSOMNOGRAPHY

MOVED: The Board of Higher Education hereby approves the request of **Massasoit Community College** to award the **Associate in Science in Polysomnography**.

One year after graduating the program's first class, the College shall submit to the Board a status report addressing its success in reaching program goals as stated in the application and in the areas of enrollment, curriculum, faculty, resources and program effectiveness.

Authority: Massachusetts General Laws Chapter 15A, Section 9(b)

Contact: Dr. Francesca Purcell, Associate Commissioner for
Academic and P-16 Policy

BOARD OF HIGHER EDUCATION

February 2009

Massasoit Community College

Associate in Science in Polysomnography

Intent and Mission

In September 2007, Massasoit Community College submitted an application to offer an Associate in Science in Polysomnography. The proposed associate degree program replaces the current certificate in polysomnography (which has been offered since 2000) and responds to professional association calls for associate-level educated polysomnographers. By 2012, candidates for the Registered Polysomnographic Technologists exam must graduate from a CAAHEP-accredited polysomnography program. Massasoit Community College intends to seek accreditation for the proposed program from the Commission on Accreditation of Allied Health Education Programs (CAAHEP).

Massasoit's mission includes responding to the health and medical needs of citizens by providing the region with educated professionals in health care. The academic program offerings at Massasoit Community College currently include 12 programs in allied health and nursing. An advisory board from the business and medical community provided guidance and support during the development of the program. The proposed program was developed to address the regional need for polysomnographers prepared to perform sleep diagnostic exams and interpret sleep studies for individuals who suffer from sleep disorders. Graduates will work in free-standing or hospital-affiliated sleep diagnostic centers.

The Massasoit Board of Trustees approved the program in May 2007. A letter of intent for the proposed program was distributed to all public colleges and University presidents and chancellors on October 29, 2007. No comments in response were received.

Need and Demand

For over a decade, there has been a rise in the number of sleep diagnostic centers in the Commonwealth developed in response to the number of patients presenting with sleep disorders. The trend has been influenced by an aging population and rising obesity rates. Simultaneously, improvements in technology and digital instrumentation have advanced the field of sleep technology, necessitating a higher level of skill to the associate-degree level. The Board of Registered Polysomnographic Technologists (BRPT) states, "The BRPT continues to vigorously support CAAHEP-accredited polysomnography programs and encourages the sleep and educational communities to continue to develop these programs over the next several years." Massasoit's proposed associate degree program in polysomnography intends to respond to this demand for accredited CAAHEP programs.

The proposed program would be the only polysomnography program in the Southeast region and the only program with associate-degree status in Massachusetts. Northern Essex Community College offers a certificate program in polysomnography. Massasoit's certificate program in polysomnography has steadily enrolled approximately 20 students per class since its

inception in 2000, indicating an ongoing interest in the field that is now becoming increasingly professionalized.

The percentage of job postings for sleep technologists and polysomnographic technologists has increased with the most recent listing of 32 open positions within 50 miles of Boston as of August 2008. Additionally, several South Shore hospitals have posted employment opportunities within the past several months. On January 7, 2009, six new polysomnography technologist jobs were advertised in major hospital settings in Boston, Norwood, and Newton.

Curriculum (Attachment A)

The proposed program comprises 67 credits (22 courses), including 24 credits (seven courses) in general education and 43 credits (15 courses) in the major. The curriculum in polysomnography is arranged with a sequence of classroom, laboratory, and clinical experiences that meet the standards and guidelines for accreditation of educational programs in polysomnographic technology. This content area includes polysomnographic instrumentation, sleep/wake physiology and pathophysiology, patient and equipment preparation for polysomnography, patient monitoring, patient safety, polysomnographic procedures, therapeutic intervention, and polysomnographic data analysis and reporting. The Caritas Christi Hospital group—which includes St. Elizabeth’s in Brighton, Carney Hospital in Dorchester, Norwood Caritas Christi, and Caritas Good Samaritan Hospital in Brockton—has requested polysomnography graduates from Massasoit and will serve as clinical sites for the program.

Admission and Enrollment

Massasoit Community College projects that enrollment for the first year of the program will be 25 part-time students in evening courses. Students must complete an application form and submit high school diplomas or equivalency. The Academic Resource Center will provide specialized polysomnographic tutoring services in the evenings.

Resources and Budget (Attachment B)

Human Resources

The proposed polysomnography program will be based in the Division of Nursing and Allied Health. The Division includes Nursing–RN (three separate programs), Respiratory Care (two programs), Radiology, Magnetic Resonance Imaging, Computerized Tomography, Medical Assisting, Dental Assisting, Phlebotomy, Medical Billing and Insurance, and Physical Education.

The Director of Polysomnography will report to the Vice President for Faculty and Instruction, and the Dean of the division. The Director will be responsible for the quality of instruction and curriculum, accreditation standards and guidelines. Working with the Dean of the Division, the Director will provide guidelines for clinical instruction and site development, student issues, and update the existing student handbook for polysomnography that explains the policies and procedures of the program.

A Medical Director will be hired and will oversee and ensure the curriculum and clinical experiences to provide that the medical standards of practice are followed.

The remaining courses will be taught by faculty who teach in the current certificate program, as well as an additional two adjunct faculty.

Library and Physical Resources

Textbooks, study guides, workbooks and sleep-scoring online activities are currently available in the library and in the polysomnography laboratory, which is equipped with computers for students. Nursing and Allied Health offerings in the library provide extensive support for polysomnography. Hundreds of resources are available in the library at Massasoit for polysomnography in the databases, Health Source Nursing and CINAHL. The library resources for students are expanding in allied health data bases.

The instrumentation and equipment needed for the laboratory is currently in place. Additional supplies are provided by the divisional budget. The 25 students who will comprise the program will be assessed allied health fees that will be specifically targeted for supplies for that program.

The laboratory is equipped with a Grass EEG Polysomnography and a Grass Telefactor VP201 Digital. Laboratory supplies are sufficient for the program and will be updated throughout the first year.

Program Goals and Objectives

The College intends to apply for and gain accreditation from the CAAHEP Committee on Accreditation for Polysomnographic Technology by 2012. Accreditation requires that graduates demonstrate proficiency in the following areas:

1. Fundamental patient care competencies, such as patient care principles, ethical and medical-legal issues, infection control, and Basic Cardiac Life Support (BCLS).
2. Operation of polysomnographic instrumentation.
3. Patient and equipment preparation for polysomnography.
4. Non-invasive procedures including EEG (electroencephalography), EOG (electrooculography), EMG (electromyography), ECG (electrocardiology), multiple breathing variables and blood oxygen levels during sleep.
5. Utilization of therapeutic interventions.
6. Polysomnographic data analysis.

External Review

The external review team comprised Andrew DesRoseiers, MS, RRT, RPSGT, Director, Caritas Centers for Sleep Medicine/Home Care; and William Eckhardt, CRT, RSGT, Director of Education at Sleep Health Centers. The evaluations stated that the program design was well thought out and that "it will be successful in giving Massasoit students a career in an allied health field with significant growth potential and direct impact on patient lives." Minor course suggestions were made, and Massasoit adequately addressed these curricular modifications. Recommendations and suggestions included developing an on-campus sleep laboratory, approaching equipment manufacturers as potential donors, and titling the program "Sleep Technology."

Massasoit Community College modified the curriculum to include the suggestions made by the review team. The College clarified that the polysomnography laboratory includes a bed and the necessary equipment. In regard to donations, the College noted that Grass Industries donated an \$80,000 EEG machine and enabled the College to purchase a Digital Telefactor at a 50 percent discount. Massasoit expects that similar donations will continue if the program is accredited. Finally, the College provided the rationale for the title of the program, seeking to follow national accreditation organization norms.

Staff Analysis and Recommendation

Following thorough review of all documentation provided, staff recommendation is for approval of the request of Massasoit Community College to award the Associate in Science in Polysomnography.

One year after graduating the program's first class, the institution shall submit to the Board a status report addressing its success in reaching program goals as stated in the application and in the areas of enrollment, curriculum, faculty, resources, and program effectiveness.

**Attachment A – Curriculum Outline
Undergraduate Program Curriculum**

Major Required (Core) Courses (# Total courses required = 14)		
Course Number	Course Title	Credit Hours
Resp301	Polysomnographic Technology I	4
Resp305	Polysomnographic Technology Clinical I	6
Resp302	Polysomnographic Technology II	4
Resp311	Polysomnographic Technology Seminar I	2
Resp306	Polysomnographic Technology Clinical II	3
Resp312	Instrumentation for Polysomnographic Technology	2
Resp307	Polysomnographic Technology Clinical III	3
Resp303	Polysomnographic Technology III	4
Resp304	Polysomnographic Technology IV	4
Resp308	Polysomnographic Technology Clinical IV	3
Resp314	Polysomnographic Technology Therapeutic Interventions	2
Resp313	Pharmacology for Polysomnographic Technology	2
Resp315	Pathophysiology and Nosology of Sleep Disorders	2
Resp316	Polysomnographic Technology Scoring	2
	Subtotal Core Credits	43
Other Required Courses in Related Subject Areas (# Total courses required = 7)		
Course Number	Course Title	Credit Hours
BIOL121	Biological Principles	4
BIOL201	Anatomy and Physiology I	4
BIOL202	Anatomy and Physiology II	4
MATH115	Contemporary Math	3
ENGL101	English Comp I	3
ENGL102	English Comp II	3
PSYC101	General Psychology	3
	Subtotal Related Credits	24
Elective Courses (# Total courses required = 0)		
		Credit Hours
	No Elective Courses	

<i>Distribution of General Education Requirements</i>		# of 67 Credits
Attach List of General Education Offerings (Course Numbers, Titles, and Credits)		
Arts and Humanities, including Literature and Foreign Languages		6
Mathematics and the Natural and Physical Sciences		15
Social Sciences		3
<i>Subtotal General Education Credits</i>		24
<i>Curriculum Summary</i>		
Total number of courses required for the degree		21
Total credit hours required for degree		67
<i>Prerequisite or Other Additional Requirements:</i>		

**Attachment B: Budget
Proposed Program**

	Description	Number	One-Time Costs	Annual Operating Costs
Faculty	Director	1		\$30,000
Staff	Clinical Coordinator	1		\$20,000
	Didactic – DCE			\$41,882
Instructional Materials (Includes library resources)	Books and Current Respiratory	25		\$2000
	Student Liability–yearly			\$350
Space	Designated Respiratory Lab	1		Equipped
Equipment	Heads			\$4000
	Grass EEG (<i>Donated</i>)			\$80,000
	Grass Telefactor VP201 Digital (<i>Purchased</i>)			\$40,000
Field & Clinical Resources	Clinical Sites			\$0
Total Costs:				\$98,232