BOARD OF HIGHER EDUCATION

REQUEST FOR COMMITTEE AND BOARD ACTION

COMMITTEE: Assessment and Accountability **NO**.: AAC 06-17

COMMITTEE DATE: June 8, 2006

BOARD DATE: June 15, 2006

MOVED: The Board of Higher Education hereby approves the request of **Northern Essex Community College** to award the **Associate in Science in Paramedic Technology**.

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: Aundrea Kelley, Associate Vice Chancellor for Academic Policy

BOARD OF HIGHER EDUCATION

June 2006

Northern Essex Community College

Associate in Science in Paramedic Technology

INTENT, MISSION AND NEED

Northern Essex Community College (NECC) has submitted an expedited proposal to offer an Associate in Science in Paramedic Technology. The proposed paramedic technology program intends to prepare students for occupations in pre-hospital emergency medical care and provide employers with qualified entry-level paramedics to meet their staffing needs. Upon successful completion of the program, graduates will be qualified for certification by the Office of Emergency Medical Services, which allows them to practice in Massachusetts. In addition, graduates will be eligible to take the national registry examination for registered paramedics (NREMT-P), which will provide career mobility.

Discussions about the feasibility of developing a paramedic technology program began in January 2005, when the College was approached by the chief executive officers of two local ambulance companies (Action Ambulance Service, Inc. and Trinity EMS, Inc.), who expressed the need for such a program in the Merrimack Valley. During the planning and design phases of the proposed program, the College worked closely with representatives from both the pre-hospital and hospital-based emergency medical providers in the area. The College's governance approval process occurred in November of 2005 and the proposed program received NECC Board of Trustees approval on April 5, 2006.

The College prepared and submitted an application for accreditation to the Massachusetts Office of Emergency Medical Services. An on-site visit was conducted on January 17, 2006 and the proposed program subsequently received full approval by the OEMS.

Demand

The United States Department of Labor predicts a modest growth (2.1%) in the national need for paramedics; however, NECC's primary service area offers significant employment opportunities for graduates of the proposed program. The two major employers of paramedics in the NECC service area, Action Ambulance Service, Inc., and Trinity EMS, Inc., reported potential employment for 40 paramedics immediately upon graduation from the proposed program. In addition, a needs analysis conducted by NECC in May 2005 indicated that there are additional openings for paramedics in local hospitals, public ambulance services, and local fire departments. Beyond the

immediate area, the Massachusetts Ambulance Association documented the need for 200 paramedics to serve the pre-hospital emergency medical needs of the Commonwealth.

The College currently offers an EMT-Basic course each fall and spring semester. Enrollment in the EMT-B course is typically 33-37 students per semester. NECC expects that at least half of this student population will seek admission to the proposed program upon successfully completing the certification examination and gaining one year of experience as an EMT-B. Additionally, the continued shortage of healthcare workers and the publicity surrounding that shortage has created a strong demand for admission to the allied health and nursing programs at NECC. The number of applications received each year for the existing associate's degree programs in nursing and allied health far exceed the capacity to enroll these students. This associate's degree program will provide students with an additional career opportunity.

The proposed program will have the preponderant market share in the Merrimack Valley and northeastern Massachusetts. The closest state-supported program is located at Massachusetts Bay Community College at the Framingham campus, which is approximately 50 miles away. Northeastern University offers a certificate program for paramedic training at its Burlington campus; however, it is prohibitively costly for many EMTs who work in the NECC service area.

CURRICULUM (Attachment A)

The proposed program requires 65 credits for completion of the associate's degree in paramedic technology: 31 credits in general education; 26 credits in professional (major) courses; and 8 credits in supporting health sciences. The curriculum plan includes all curricular content and standards mandated by the National Emergency Medical Services Core Content; the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions Curriculum Supplement; and the Massachusetts Office of Emergency Medical Services.

In recognition of the need to design a curriculum plan that meets the needs of working adults, the proposed program will include the use of the summer semester between the first and second year, as well as providing opportunities for clinical and fieldwork experiences during the winter break of the second year.

Clinical learning experiences will take place in nearby hospitals and academic medical centers. UMass Memorial Medical Center, Lowell General Hospital, Lawrence General Hospital, Beverly Hospital and Caritas Holy Family Medical Center have agreed to be primary clinical affiliates. Fieldwork learning experiences will be scheduled with private and public ambulance services. Action Ambulance Service, Inc. and Trinity EMS, Inc. have agreed to be primary fieldwork affiliates.

ADMISSION AND ENROLLMENT

A selective admissions process will be used to admit students to the proposed paramedic technology program. Successful applicants will have a high school diploma or GED certificate; demonstrate proficiency in reading, writing and mathematics through the Accuplacer assessment system; be at least 18 years old; have a valid driver's license; be a currently certified EMT-B with at least one year of post-certification experience; and have completed one semester of college-level anatomy and physiology (equivalent to the college's Anatomy & Physiology I course).

A cohort of 15 students is projected to be admitted in fall 2006. The College anticipates gradually increasing program capacity over the first three years of the program's existence to reach a goal of an entering cohort of 20 students each September. The program is designed to be completed by a full-time student in 21 months encompassing four regular academic semesters, the summer semester between the first and second year, and the winter session during the second year.

RESOURCES AND BUDGET (Attachment B)

Human Resources

A full-time faculty position has been allocated to the program, and this individual (Betsy Gertz, RN, EMT-P) was hired in January 2006 to shepherd the accreditation process; to develop clinical and laboratory manuals; to develop competency assessment instruments; and to develop a comprehensive and systematic program outcomes evaluation plan. Pending approval by the Board of Higher Education, Ms. Gertz will manage the program and teach classes. The College will also establish part-time positions for the proposed program including a clinical education coordinator to manage the clinical education component; a medical director to provide periodic physician's lectures; and technical assistants to assist in the implementation of faculty-designed learning experiences in the clinical laboratory sessions of each professional course.

Library and Physical Resources

The proposed paramedic technology program courses will be scheduled in existing classrooms and computer laboratories on the Lawrence campus. Laboratory sessions will be scheduled in the Health Education Support Center which includes a variety of patient simulators and critical care equipment. The proposed program requires much of the same equipment required to support the existing Nursing, Respiratory Care, Medical Assistant, and post-RN Critical Care Nursing programs; consequently, the College will have little need to purchase specialized equipment to support the proposed program. In addition, NECC has entered into a consortium agreement with Action Ambulance Service, Inc. and Trinity EMS, Inc. wherein these companies will either donate or provide on a loaner basis supplies and equipment not owned by the College but required by the proposed program. Consequently, no capital expenditures will be

required to implement the proposed program. (The contributions of Action Ambulance Service, Inc. and Trinity EMS, Inc. appear in the budget as in-kind support.)

Existing library holdings that support the nursing and allied health programs will support the proposed paramedic technology curriculum. Journals and texts specific to emergency medicine have been identified and will be purchased. The budget demonstrates support for the library holdings.

PROGRAM GOALS AND OBJECTIVES

Goal	Objective
To prepare graduates who apply the basic concepts of development, pathophysiology, and pharmacology while assessing and managing patients in the emergency setting.	100% of the graduates will pass the state EMT-P examination within two attempts.
To prepare graduates who communicate effectively with patients.	100% of the graduates will receive an evaluation of "Met" on the communication competency. 100% of the graduates will successfully complete Conversational Medical Spanish (SPN105).
To prepare graduates who establish and maintain a patent airway, oxygenate and ventilate a patient.	100% of the graduates will receive an evaluation of "Met" on the airway management competencies 100% of the graduates will successfully complete the airway management station during the state practical examination.
To prepare graduates who take a proper history and perform a comprehensive physical examination on any patient, and to communicate the findings to others (e.g., emergency physicians).	100% of the graduates will receive an evaluation of "Met" on the history and physical examination competency. 100% of the graduates will receive an evaluation of "Met" on the professional communication competency.
To prepare graduates who integrate pathophysiological principles and assessment findings to formulate a field impression, and to implement the treatment plan for medical, trauma, neonatal and pediatric, geriatric, culturally and socioeconomically diverse, and chronically ill patients.	100% of the graduates will receive an evaluation of "Met" on the "Develops and implements a treatment plan" competency in each patient population.
To prepare graduates to manage the scene of an emergency.	100% of the graduates will receive an evaluation of "Met" on the "Manages the scene of an emergency" competency.
To assist in meeting the employment need for paramedics.	90% of the graduates will be positively placed within 12 months following graduation.

LETTER OF INTENT

In response to the March 2006 circulation of the letter of intent, Massachusetts Bay Community College wrote in support of the proposed program and stated that it will address the growing need for paramedics, especially in the Haverhill and Lawrence areas.

EXTERNAL REVIEW

The proposed Paramedic Technology program was reviewed by the Massachusetts Office of Emergency Medical Services personnel on January 20, 2006. Following the submission of a self-study report and the onsite evaluation of the program's curriculum and resources, the program received full accreditation. The OEMS accreditation process revealed no areas in which the program was out of compliance with the Standards for Accreditation. Consequently, no institutional response was required.

STAFF ANALYSIS AND RECOMMENDATION

Following thorough review of all documentation provided, recommendation is for approval of the proposed Associate in Science in Paramedic Technology. 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

Associate of Science Degree in Paramedic Technology

	Undergraduate Program Curriculum Outline		
	Required (Core) Courses in the Major (Total # courses required = 9)		
Course Number	Course Title		Credit Hours
EMT103	Introduction to Paramedicine		2
EMT104	Pharmacology for the Paramedic (EMT-P)		3
EMT105	Medical Emergencies		3
EMT106	Trauma Emergencies		4
EMT107	Cardiovascular Emergencies		3
EMT108	Paramedicine Clinical Rotation		4
EMT109	Paramedicine Field Experience I		2
EMT110	Special Populations in Paramedicine		3
EMT209	Paramedicine Field Experience II		2
		Sub Total Core Credits	***26***
Other Required Courses in Related Subject Areas (# Total Courses required = 5)			
HES205	Cardiac Dysrhythmia Recognition and Management		2
HES207	Clinical Pathophysiology		3
HES209	Advanced Cardiac Life Support (ACLS)		1
HES210	Pediatric Advanced Life Support (PALS)		1
HES211	Neonatal Resuscitation Program (NRP)		1
	Sub Total Required Credits		***8***
Distribution of General Education Requirements			# of Gen Ed Credits
Attach List of General Education Offerings (Course Numbers, Titles, and Credits)			
Arts and Humanities, including Literature and Foreign Languages			***12***
COM	Communications elective		3
ENG101	English Composition I		3
ENG102	English Composition II		3
SPN105	Conversational Medical Spanish I		3
Mathematics and the Natural and Physical Sciences			***10***
MA	Math elective (MAT120, College Algebra, or higher)		3
BIO121	Anatomy & Physiology II		4
CIS	Computer Science elective		3
Social Sciences			***6***
PSY101	Introduction to Psychology		3
SOC	Social science elective		3
	Sub Total General Education Credits		**31 ***
*(*including the free elective that may be drawn from any of the general education categories)*			
	Curriculum Summary		
	Total number of courses required for the degree	23	
	Total credit hours required for degree	65	
Prerequisite, Concentration or Other Requirements: BIO121 Anatomy & Physiology I (or equivalent) is			
prerequisite for admission			

Attachment B –Proposed Budget

NEW ACADEMIC PROGRAM BUDGET – SAMPLE FORMAT

One Time/Start Up costs		***Annual Expenses***			
	Cost Categories	**Year 1**	**Year 2**	**Year 3**	**Year 4**
$7,500	Full Time Faculty *(Salary & Fringe)*	$52,480	$55,321	$56,981	$58,690
	Part Time/Adjunct Faculty (*Salary & Fringe*)	$25,000	$25,750	$26,523	$27,320
	Staff				
	General Administrative Costs				
	Instructional Materials, Library Acquisitions	$3,000	$3,000	$3,000	$3,000
	Facilities/Space/ Equipment				
	Field & Clinical Resources				
$500	Marketing	$500	$500	$500	$500
	Other (Specify)				
$8,000	**TOTALS**	**$80,980**	**$84,571**	**$87,004**	**$89,510**
		Annual Income			
	Grants				
	Tuition	$12,456	$21,096	$21,096	$21,096
	Fees	$48,660	$77,448	$77,448	$77,448
	Departmental				
	Reallocated Funds				
	Other (Specify) In-kind support	$10,000	$10,000	$10,000	$10,000
	TOTALS	**$71,116**	**$108,544**	**$108,544**	**$108,544**