

**BOARD OF HIGHER EDUCATION
REQUEST FOR COMMITTEE AND BOARD ACTION**

COMMITTEE: Academic Affairs

NO: AAC 17-13

COMMITTEE DATE: March 14, 2017

BOARD DATE: March 21, 2017

**APPLICATION OF MOUNT WACHUSETT COMMUNITY COLLEGE TO AWARD THE
PARAMEDIC TECHNOLOGY CERTIFICATE**

MOVED: The Board of Higher Education hereby approves the application of **Mount Wachusett Community College** to award the **Paramedic Technology Certificate**.

Upon graduating the first class for this program, 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: Winifred M. Hagan, Ed.D.,
Associate Commissioner for Academic Affairs and Student Success

BOARD OF HIGHER EDUCATION

March 2017

Mount Wachusett Community College Paramedic Technology Certificate

INTENT AND MISSION

The proposed Paramedic Technology Certificate (PTC) program is planned to align with the mission of Mount Wachusett Community College (MWCC) by providing relevant, high-quality learning opportunities and services that respond to diverse student and community needs, foster student success and stimulate civic, workforce and economic vitality.

The purpose of the proposed PTC is to address the current employment needs of local fire department and ambulance companies. MWCC has determined, in conjunction with local communities, that there is a need for more certified paramedics to fill an existing void. Additionally, it is expected that the proposed program will afford current basic emergency medical technicians and other first responders an opportunity to upgrade skill sets and improve job status. MWCC intends that students who complete the PTC program will be eligible to take the Massachusetts psychomotor exam for paramedics and the written National Registry Exam for Emergency Medical Technicians (NREMT) as a paramedic (EMT-P). It is expected that one program outcome will be to achieve EMT-Paramedic status through certification and employment. MWCC intends that students completing the program will achieve first-time pass rates of 75% for both the written and practical exam and a 90% job placement rate. The program will be required to work toward the Committee on Accreditation of Educational Programs for Emergency Medical Services Professions (CoAEMSP) accreditation which is the requirement for the Massachusetts Office of Emergency Medical Services.

The proposed program has obtained all necessary governance approvals on campus and was approved by the Mount Wachusett Community College Board of Trustees on October 12, 2016. The required letter of intent was circulated on September 12, 2016. No comments were received.

NEED AND DEMAND

National and State Labor Market Outlook

According to the Occupational Handbook employment of paramedics and emergency medical technicians is expected to increase by 24 percent from 2014 to 2024. The Bureau of Labor and Statistics ranked EMT's and paramedics as the 14th fastest growing occupation in Massachusetts and in 12th position for the occupation with the most openings requiring some college in Massachusetts. According to the Massachusetts Executive Office of Labor and Workforce Development there are projected trends of job growth and openings within Massachusetts for EMT's. The Fire Science Program advisory board has indicated that municipalities in northern Worcester County need to employ paramedics and seek new firefighters who are dually credentialed as both paramedics and fire fighters. Fire District 8

Mutual Aid Association and Med Star, a local emergency medical service provider for Gardner and surrounding cities, has requested that MWCC develop a Paramedic Technology certificate to complement the current Fire Science Technology degree program and the Basic Emergency Medical Technician courses offered by the college. [Indeed.com](https://www.indeed.com)¹ indicates paramedic positions in the Gardner area to include 84 full-time and 14 part-time positions available within a 50 mile radius of MWCC with 60 of the positions posted as entry level. The 50-mile radius crosses into New Hampshire, which requires employees to have national certification to be licensed. Thus, students from bordering towns will be eligible to be educated at MWCC through the New England Regional Student Program (Tuition Break). As well, it is expected that approximately 26% of the current firefighters within a 50-mile radius of Gardner will retire soon.

Student Demand

The student market for this program would be student who previously completed the Basic EMT coursework and/or fire science students. Since 2012, MWCC has offered 2 sections of Basic Emergency Medical Technician coursework with 201 students enrolled. Additionally, MWCC reports that enrollment in the fire science program has grown annually from 35 students in 2012 to 51 students in 2016. These students have reached out to the MWCC admissions staff to inquire about advancement to paramedic at MWCC. Data collected by the program from 2005-2015 was detailed in the College's proposal and it strongly supports student demand.

OVERVIEW OF PROPOSED PROGRAM

The development of the proposed program was a direct response to repeated request by the local first responder community. MWCC's Fire Science advisory board indicated that there was a dramatic need to increase the pool of certified paramedics to fill the need in the North Worcester County area. In January 2013, MWCC convened an advisory board meeting to discuss the reality of developing a paramedic program. The advisory board encompassed many of the local fire chiefs, local ambulance company and hospital representatives. Based on this meeting, MWCC began to explore the state and external accreditation requirements to find a qualified individual who meets the accreditation requirements and design the program.

The proposed curriculum has been developed to meet or exceed the content and competency requirements of the National EMS Education Standards. In January 2013, the Commonwealth of Massachusetts required that all new paramedic programs would need to seek programmatic accreditation. The guidelines are very detailed, providing a framework for a comprehensive knowledge of EMS systems, safety/well-being of the paramedic, and medical/legal and ethical issues. It also includes content knowledge of anatomy, physiology, pharmacology and pathology.

Duplication

Quinsigamond Community College has a paramedic technology certificate program and Greenfield Community College works with Springfield Technical Community College to offer a paramedic technology program. The Quinsigamond program course of study is scheduled as a

¹ Retrieved 12/10/2016 <https://www.indeed.com/jobs?q=Fire+Science+Technology&l=Massachusetts+>

traditional day program. The rotating schedule of the proposed program is designed to meet the needs of local, working students, among them those who work in the emergency response field.

ACADEMIC AND RELATED MATTERS

Admission

All students who are certified as a Basic EMT and have 1 year experience as an EMT are expected to qualify for admission to the program.

PROGRAM ENROLLMENT

	Number of Students Year 1	Number of Students Year 2	Number of Students Year 3	Number of Students Year 4
New Full-Time	24	24	24	24
Continuing Full-Time	0	16	16	16
New Part-Time	0	0		
Continuing Part-Time	0	0		
Totals	24	40	40	40

Curriculum (Attachment A)

MWCC is proposing a unique curriculum delivery model and proposes to accept a total of 24 students that would comprise 12 day-students and 12 evening-students. Content offerings would be the same making it feasible for students to adjust class attendance as needed to satisfy the rotating work schedules in the industry. The proposed curriculum consists of 46 total credits with 39 credits directly related to paramedic technology coursework.

Internships or Field Studies

MWCC has had several meetings with local healthcare facilities and ambulance companies to make arrangements for clinical placements and field work experiences. Heywood Hospital, Health Alliance Hospital and Med Star Ambulance have all offered to provide students with clinical placements. It is expected that further details will be developed after the program has been approved by BHE.

RESOURCES AND BUDGET

It is planned that courses in the Division of Health Professions, Public Services and Social Sciences programs will share nursing simulation equipment with the proposed program, which is expected to decrease the cost of purchases for additional field and clinical resources for the proposed PTC program. It is planned that field and clinical placement sites will be needed, and that existing simulation technology will also be utilized. Faculty, consumable materials, and limited equipment needs will comprise the largest costs for this PTC program. MWCC is proposing an additional tuition fee of \$1100 per semester similar to that utilized in practical nursing. With an estimate of 24 students in the first year, revenue generated should be \$329,160.00 from tuition and fees.

Fiscal (Attachment B)

Faculty and Administration (Attachment C)

MWCC plans that a full-time faculty member will serve as the program director and report to the Dean of Health Professions, Public Service Programs and Social Sciences. The director will work collaboratively within the division on scheduling, budget and curriculum. The Dean will report to the Vice President of Academic Affairs, who is a member of the MWCC Executive Council and reports to the President. MWCC plans to hire a full-time faculty member and several adjuncts to deliver the required coursework. MWCC also plans to hire a medical director and a clinical coordinator. The program director, medical director and clinical coordinator positions reflect requirements of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). It is planned that MWCC will hire a full-time program director, the medical director will be a stipend position at a flat rate between \$8,000 - \$10,000 per year, and the clinical coordinator will be a part-time position. The college plans to hire 6 adjuncts to teach didactic and clinical instruction. Existing staff will provide administrative support, enrollment and advising services, and marketing for the program.

Facilities, Library and Information Technologies

MWCC has a dedicated classroom for the paramedic program. The classroom is equipped with countertops and a sink suitable for hand washing. It is situated adjacent to the existing nursing simulation laboratory space. This dedicated space is a former chemistry lab which is 1,519 square feet. Adjacent to this space is a smaller prep room measuring 280 square feet which will be utilized as an assessment room. This space will be used for students to learn how to manage real-life emergencies on simulation equipment with instructor feedback. Media equipment purchased with the simulation equipment will provide the opportunity to record and debrief student's learning.

Through collaboration with the nursing program and Basic EMT program, the proposed paramedic program will have access to the established SIMS labs at the Gardner and Devens campuses. The 'Sims Lab' is a patient simulation environment which can provide realistic hands-on clinical experiences for students with the expectation that patient care will be improved. The patient simulation environment allows students to develop communication, problem solving, critical thinking, team work and patient care skills. The Sims Lab provides an educational setting which promotes effective quality learning experiences. Gardner and Devens Sims Labs include four patient care areas that closely resemble the space that students may find in a clinical site. Students are provided with direct hands-on experience with patient simulators placed in realistic medical settings. The Gardner and Devens Sim Lab has the Demo Dose™ medDispense™ system that simulates a hospital medication delivery system with a workstation that includes a 15" touch screen and a 25-drawer base unit, as well as other lab equipment and supplies that help add to the realism of the environment.

Camera equipment for recording and debriefing scenarios has been installed by the AV Department in the control area of the Simulation lab. Recording stations have advanced video recording systems (AVS) with pan-tilt-zoom cameras corresponding to the patient care areas. The software is a simple debriefing system that enables SimMan, SimBaby and SimNewB users

to capture simulation video, audio, data logs, and patient monitoring. It automatically integrates data from the video cameras, microphone, and patient monitor with an event log from the patient simulator, creating a debriefing file that is easy to review with students. The software is integrated into the MWCC LAN, allowing simulations to be viewed throughout the facility. The AVS provides instructors with a tool to review all student assessments, therapies, patient interactions, critical thinking skills, and communication skills. Students benefit from observing the impact of their clinical practice skills. Through funding by the U.S. Department of Labor Trade Adjustment Assistance Community College and Career Training (TAACCCT) Grant, an additional 3G SimMan simulator and SimView with stationary and mobile technologies was acquired to be used in EMT and nursing courses as well as the proposed paramedic program. This will complement the existing simulation equipment and allow the faculty to provide training in areas outside the simulation lab.

The LaChance Library is fully staffed and supported by a head librarian, two reference librarians and additional clerical support. Faculty and students have full access to databases including EBSCO, CINAHL, Health Reference Center Academic and other reference materials on-line or at the Gardner Campus. Blackboard is the college's student learning management system. Instructors post class information such as class syllabi, assignments, and documents in Blackboard.

Affiliations and Partnerships

It is expected that students who complete the proposed PTC program will be able to transfer all of their credits to the college's Interdisciplinary Studies Degree. Northeastern University, Cambridge College, the University of Phoenix, and University of Massachusetts-University Without Walls have articulation agreements with MWCC's Interdisciplinary Studies Degree.

An advisory committee for the proposed program began convening in January 2013, and consists of many different first responders including fire service personnel, ambulance company representatives and hospital staff representatives. Advisory board members have been contacted individually during the development of the proposed program to provide perspectives and expertise. Once the program is approved by BHE, the advisory committee is expected to meet twice during the academic year.

PROGRAM EFFECTIVENESS

Goal	Measurable Objective	Strategy for Achievement	Timetable
Hire qualified program director, medical director and adjunct faculty/clinical coordinator	<p>March 2017</p> <p>MWCC hire a full time faculty program director and medical director</p> <p>By summer 2017, MWCC will have hired a part time adjunct/clinical coordinator</p>	MWCC will post for qualifications and share with fire science and paramedic advisory board member to secure qualified faculty for all positions	March 2017 and summer 2017
National Registry of EMT-paramedic pass	PTC completers achieve minimum 75% first-time test	During curriculum experience, students will	To be monitored

rates	takers pass on both written registry exam and practical exam.	be tested using credentialing exam-like questions and experience practical skills checks/exams.	annually with each graduating cohort
Job placement	Job placement rates 90% of successful graduates	Utilize advisory board members as potential employers, participate in annual job fairs. Provide students with job placement strategies.	Monitor annually with each graduating cohort
CAAHEP/CoAEMSP approval	Achieve initial approval	MWCC curriculum has been developed to meet the requirements outlined by the national EMS educational standards.	Once approved, immediately begin process to earn full accreditation.
Maintain industry-recognized curriculum	Achieve and maintain CAAHEP/CoAEMSP accreditation.	Continuous systemic program evaluation to monitor curriculum alignment with CAAHEP/CoAEMSP standards. Submit program update annually to VP of Academic Affairs and complete full program review every five years.	Annually 5-year intervals
Transfer	50% of student completing the certificate program will transfer into degree program	Provide continuous advisement about the advantage of additional credentials.	Monitor annually

EXTERNAL REVIEW AND INSTITUTIONAL RESPONSE

The proposed program was reviewed by Dr. Jeffrey Cukor, M.D., FACEP, Associate Professor in Emergency Medicine at University of Massachusetts Medical School in Worcester MA and Nancy L. Brubaker, M.Ed., RN, NR, EMTP, and Program Director of the Paramedic Education program at New Hampshire Technical Institute in Concord, NH.

The reviewers indicated that the proposed program is of general good quality, responsive to a significant need in the region, well designed and important to the local community. The team also found MWCC staff to have sufficient knowledge of the programmatic accreditation requirements to be able to earn this distinction. The team suggested statistical data be verified by local employers to ensure accuracy and recommended strengthening connectedness to hospital emergency units. They also suggested program adjustments related to a greater emphasis on addiction due to the opioid crisis and the frequency of alcohol and drug issues within a paramedic's patient population. The review team also recommended increased coverage of evidence based medicine foundations in the program and of Community Paramedicine, a growing phenomenon in the field. The reviewers made multiple suggestions for MWCC's institutional support of the program. These included a need for more clear

communications to students regarding marijuana in particular and other drug policies in clinical environments where they may be subject to random testing, as well as a policy for malpractice and/or negligence insurance as these are significant issues for paramedics and students in clinical environments.

In response MWCC confirmed employment postings published for over 30 days and a single ambulance service listing 23 full-time open positions in the central Massachusetts service area with an additional 10 more full-time postings in the Pioneer Valley area. MWCC added the current chief medical officer from a local hospital to the advisory board, in order to provide an important bridge to critical hospital departments for clinical rotations. MWCC has affirmed that policies and procedures for securing the safety and security of students will be fully developed and implemented after the program is approved by BHE and before enrolling students. In particular, the MWCC Board of Trustees recently approved a policy restricting marijuana use.

STAFF ANALYSIS AND RECOMMENDATION

Staff thoroughly reviewed all documentation submitted by Mount Wachusett Community College and the external reviewers. Staff recommendation is for approval of the proposed **Paramedic Technology Certificate**.

ATTACHMENT A: CURRICULUM

Paramedic Technology Certificate

Required (Core) Courses in the Major = 11 Total # courses required = 13		
<i>Course Number</i>	<i>Course Title</i>	<i>Credit Hours</i>
HCC 201	Paramedicine I	4
HCC 202	Paramedicine II	3
HCC 203	Paramedicine III	3
HCC 211	Paramedicine IV	3
HCC 212	Medical I	4
HCC 213	Medical II	3
HCC 214	Paramedicine Clinical I	4
HCC 216	Paramedicine Clinical II	4
HCC 217	Trauma	4
HCC 220	Shock/Resuscitation, Special Populations	4
HCC 221	Paramedicine Field Internship	3
	Sub Total Required Credits	39
Elective Courses Total # courses required = 0		
	Sub Total Elective Credits	[0]
Distribution of General Education Requirements Attach List of General Education Offerings (Course Numbers, Titles, and Credits)		# of Gen Ed Credits
Arts and Humanities, including Literature and Foreign Languages—ENG 101		3
Mathematics and the Natural and Physical Sciences BIO 152		4
Social Sciences		[0]
Sub-Total General Education Credits		7
Curriculum Summary		
Total number of courses required for the degree	13	
Total credit hours required for degree	46	
Prerequisite, Concentration or Other Requirements: Applicants must be a current EMT Basic with 1 year of work experience.		

ATTACHMENT B: BUDGET

Paramedic Technology Certificate Budget

One Time/ Start Up Costs		Annual Expenses			
		Year 1	Year 2	Year 3	Year 4
	Cost Categories				
	Full Time Faculty (Salary & Fringe)	\$80,000.00	\$82,050.00	\$85,000.00	\$87,125.00
	Part Time/Adjunct Faculty (Salary & Fringe)	\$50,000.00	\$51,250.00	\$52,531.00	\$53,844.00
	Staff –Medical Director	\$10,000.00	\$10,000.00	\$10,000.00	\$10,000.00
	Clinical Coordinator	\$32,760.00	\$33,579.00	\$34,418.00	\$35,279.00
	Instructional Materials, Library Acquisitions		\$10,000	\$10,000	\$10,000
	Facilities/Space/Equipment	\$210,000.00			
	Marketing	\$5,000.00	\$4,000.00	\$500.00	\$500.00
	Other (Specify)				
	TOTALS	\$387,760.00	\$190,879.00	\$192,449.00	\$196,748.00

One Time/Start- Up Support		Annual Income			
		Year 1	Year 2	Year 3	Year 4
	Revenue Sources				
GPSTEM	Grants	\$160,000.00			
	Tuition	\$228,528.00	\$222,528.00	\$222,528.00	\$228,528.00
	Fees \$1100 program fee per student annually to cover additional program costs	\$26,400.00	\$26,400.00	\$26,400.00	\$26,400.00
	Departmental				
	Reallocated Funds				
	Other (Specify)				
	TOTALS	\$414,928.00	\$248,928.00	\$248,928.00	\$248,928.00

ATTACHMENT C: FACULTY

Summary of Faculty ² Who Will Teach in Proposed Program							
Name of faculty member (Name, Degree and Field, Title)	Check if Tenured	Courses Taught Put (C) to indicate core course. Put (OL) next to any course currently taught online.	Number of sections	Division of College of Employment	Full- or Part- time in Program	Full- or part-time in other department or program (Please specify)	Sites where individual will teach program courses
Program Director Bachelor of Science degree requirement	<input type="checkbox"/>	<ul style="list-style-type: none"> • HCC 201 (fall) • HCC 202 (fall) • HCC 211 (Spring) • HCC 216 (summer) 	2 2 2 2	Day	Full	yes [If yes, specification.]	• Gardner
Clinical Coordinator	<input type="checkbox"/>	<ul style="list-style-type: none"> • HCC 203 (fall) • HCC 214 (spring) • HCC 220 (fall) • HCC 221 (fall) 	2 2 2 2	Adjunct	Part	No	• Gardner
Adjunct Faculty		<ul style="list-style-type: none"> • HCC 212 (spring) • HCC 213 (spring) • HCC 217 (summer) 	2 2 2	Adjunct	Part	no	• Gardner

² At this time MWCC has not hired any qualified staff since the program has not been approved. Several individuals associated with the current delivery of the fire science and basic EMT coursework have expressed interest in faculty positions. These individuals have the qualifying credentials as a paramedic and educational degree requirements of Bachelor's Degree or higher.