

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

COMMITTEE: Academic Affairs

NO: AAC 17-16

COMMITTEE DATE: May 2, 2017

BOARD DATE: May 9, 2017

**APPLICATION OF MOUNT WACHUSETT COMMUNITY COLLEGE TO AWARD THE
ASSOCIATE IN APPLIED SCIENCE IN VETERINARY TECHNOLOGY DEGREE**

MOVED: The Board of Higher Education hereby approves the application of **Mount Wachusett Community College** to award the **Associate in Applied Science in Veterinary Technology**.

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

May 2017

Mount Wachusett Community College Associate in Applied Science in Veterinary Technology

INTENT AND MISSION

The proposed Associate in Applied Science in Veterinary Technology (ASVT) program is aligned with the Mount Wachusett Community College (MWCC) mission. The program is expected to provide the region's employers with trained veterinary technicians who will be qualified to work in a variety of animal care settings including hospitals, clinics and research facilities. The decision to educate and train veterinary technicians aligns with the Access, Learning and Progress goals of MWCC's strategic plan. Once the college's Veterinary Technician Program is certified by the American Veterinary Medical Association (AVMA), graduates will have the opportunity to sit for the Veterinary Technician National Exam (VTNE). Students who pass the national exam will be credentialed veterinary technicians, able to perform medical tests in a laboratory environment for use in the treatment and diagnosis of diseases in animals; prepare vaccines and serums for prevention of diseases; prepare tissue samples, take blood samples, and execute laboratory tests; sterilize instruments and materials and maintain equipment and machines. Veterinary technicians are also qualified to assist a veterinarian during surgery, and perform medical tests under the supervision of a licensed veterinarian to help diagnose the illnesses and injuries of animals

The proposed program has obtained all necessary governance approvals on campus and was approved by the Mount Wachusett Community College Board of Trustees on February 28, 2017. The required letter of intent was circulated on February 16, 2016. No comments were received.

NEED AND DEMAND

National and State Labor Market Outlook

MWCC's data sources used in developing the proposed program included the United States Bureau of Labor Statistics Occupational Outlook Handbook, the Massachusetts Office of Labor and Workforce Development, CareerInfoNet and Emsi (economicmodeling.com). Emsi data indicated a 21.6% job growth in Massachusetts for Veterinary Technicians during 2015-2025 with 3,430 jobs projected in 2025. The Bureau of Labor Statistics (BLS) projected 2860 jobs in 2024. According to the BLS Occupational Outlook Handbook, employment of veterinary technicians from 2014-2024 is projected to grow by 19% nationally. MA growth is projected to grow by 8% for the same period. Employment will grow as more veterinarians utilize technicians for general care and lab work and as they continue to replace lower skilled veterinary assistants¹.

¹ Retrieved January 2017 <http://www.onetonline.org/link/details/29-2056.00>

Student Demand

MWCC reports that Nashoba Valley Technical High School and Montachusett Regional Vocational Technical School (Monty Tech)'s Animal Science programs expect to graduate first cohorts in 2018 and 2021 respectively. MWCC also indicated that Worcester Technical High School reported a total of 48 students expected to graduate from 2017-2019 with 16 students graduating per year. According to Emsi Q4 2016 data set, there were 78 veterinary assistants employed in the MWCC region during 2015. It is expected that veterinary assistants will be recruited for the proposed veterinary technician program. Additional data provided by Gray Associates² resulted from a March 2017 contractual agreement with MWCC in which research on the degree program's viability was based on an evaluation of several variables including: student demand, degree fit, employment and competitive intensity. Using the Gray Associates model, veterinary technology scored high in student demand.

OVERVIEW OF PROPOSED PROGRAM

The factors contributing to MWCC's decision to offer an ASVT program include Monty Tech's animal science's addition to their program of study, Advisory Board members' encouragement, and promising data provided by the Emsi Occupation Summary for Veterinary Technologists and Technicians. Monty Tech's plans for the Animal Science program include building a 6000+ sq/ft instructional facility and community clinic. The community clinic at Monty Tech will be staffed by employees from both Becker College and Monty Tech and accessible to MWCC students for valuable learning experiences. Monty Tech graduates will be veterinary assistants well positioned to continue their studies in veterinary science should they choose to enter MWCC's ASVT Program. In addition, Gardner Animal Care Center (located across the street from MWCC), Mid-State Mobile Veterinary Clinic based in Leominster, Tufts University Cummings Veterinary Medical Center in North Grafton and the Massachusetts Veterinary Referral Hospital have provided letters of support to MWCC. These letters of support outline each facility's willingness to develop internship opportunities. Letters attesting to this were included with the MWCC application.

Administration and oversight of the ASVT Program will fall under the Division of Business, Science, Technology and Math. The Division manages the delivery of all science courses at MWCC, including general biology, anatomy and physiology, chemistry and microbiology. It is planned that the ASVT Program Director and ASVT faculty will report to the division dean and assistant dean. Clinical requirements for the program will be met through placements in veterinary clinics, hospitals and other appropriate sites for experiential training.

Duplication

Becker College and Holyoke Community College offer accredited veterinary technician training programs and are geographically closest to MWCC; Mount Ida College and North Shore Community College also offer programs.

² A strategy consulting firm focused on higher education www.grayassociates.com

ACADEMIC AND RELATED MATTERS

Admission

The ASVT Program at MWCC is planned to be a selective enrollment program, using similar criteria for those that are used for the competitive nursing program (For example, demonstrated competency in Mathematics and English through placement test or completion of a college-level course and successful completion of a lab science course). Selection criteria are expected to be based on a point system distributed by academic performance and prior learning. Students will be required to submit verification of completion of high school or equivalency. Current high school students must submit a high school transcript. Education completed outside of the U.S. must be officially evaluated for high school equivalency. Transfer credits for education completed outside of the U.S. must also be evaluated for equivalency. Students whose native language is not English and those who have not completed Grades K - 12 in the U.S. must demonstrate English proficiency by having completed ENG 101 with a grade of C+ or higher, or have completed a bachelor's degree from an accredited U.S. college or university, or score 213 on the computerized version, 550 on the paper version of the Test of English as a Foreign Language (TOEFL).

Additionally, once admitted and prior to enrollment and course registration in the program, candidates will be required to show proof of current immunizations and a health examination by a licensed healthcare provider within two years of entrance to the college; be physically able with sufficient mobility and motor coordination to safely provide animal care; have liability insurance coverage, show proof of health insurance, complete forms for CORI and SORI checks, complete regular drug testing prior to entrance and periodically during enrollment, as well as be responsible for transportation to clinical sites during clinical rotations. Some clinical sites may require the student to complete background checks prior to clinical placement.

PROGRAM ENROLLMENT

	# of Students Year 1	# of Students Year 2	# of Students Year 3	# of Students Year 4
New Full-Time	16	16	16	16
Continuing Full-Time	0	12	12	12
Totals	16	28	28	28

Curriculum (Attachment A)

MWCC has established K-12 partnerships as a priority strategy that is reportedly the driving force behind the decision to propose the ASVT program. In addition to a Chapter 74 articulation agreement with Monty Tech, MWCC expects to be able to extend opportunities to students from

the Nashoba Valley and Worcester Technical high schools. MWCC plans to enter into articulation agreements with these high schools and calculate earned college credits for qualified students. Curriculum alignment that back-maps to the technical high school programs and forward-maps to four-year institutions was significant to the design of the proposed ASTV curriculum. In addition to articulation agreements MWCC expects to expand dual enrollment partnerships with local high schools.

Internships or Field Studies

Clinical requirements for the proposed program are expected to be met through student placements in veterinary clinics, hospitals and other sites providing experiential learning opportunities. Requirements are expected to meet those of the Health Professions programs for nurses, nurse assistants and physical therapy assistants. MWCC will draw on the history of its health professions programs and the expertise of the dean and assistant dean of Health Professions when managing experiential learning and training opportunities in the field. Comprehensive and detailed, sample agreement forms for clinical affiliations with MWCC were provided in the proposal and included specific information regarding the roles, responsibilities, provisions, evaluations, ethics, indemnifications and terms of the relationships.

RESOURCES AND BUDGET

Fiscal (Attachment B)

Faculty and Administration (Attachment C)

It is expected that once MWCC receives approval from the Board of Higher Education to offer an ASVT and prior to seeking initial accreditation from the American Veterinary Medical Association (AVMA), MWCC will hire one full-time program director who is a licensed veterinarian or credentialed veterinary technician and a graduate of an AVMA CVTEA-accredited program. The program director will be provided with a minimum of two years employment under the supervision of a licensed veterinarian and will be eligible to teach within the program. It is planned that the Program Director will report to the Dean and Assistant Dean of Business, Science, Technology and Math. MWCC also expects to hire part-time equivalent veterinarians as ASVT faculty or adjunct faculty. The program director will be eligible to teach within the program.

Facilities, Library and Information Technologies

The LaChance Library is fully staffed and is supported by a head librarian, two reference librarians and additional clerical support. Faculty and students have full access to databases including CINAHL Complete, Health Reference Center Academic, some from EBSCO and other reference materials online or at the Gardner campus.

Blackboard is the learning management system used by all instructors to support the online delivery coursework. The faculty works with the Dean of Curriculum, Instruction and Assessment to incorporate technologies into the instruction of their online courses.

A dedicated lab space is planned to house the vet tech equipment and to be the location for the majority of the non-clinical course work. This dedicated space was previously used as a biology

lab and is currently being repurposed in support of the veterinary technician program. The space has an adjacent lab prep area that will provide additional training space as needed. MWCC anticipates that the program director's office will be located near the division offices for the dean and assistant dean allowing for an easy flow of student, faculty and staff interactions. The college has made a strategic decision to not use live animals because of the logistical and financial implications of operating an animal lab, which would make the program cost prohibitive to implement.

MWCC's approach to using a variety of instructional methods will provide students the discipline of the classroom and experiential learning within community animal care facilities. The equipment MWCC proposes to purchase supports the training required to prepare students for clinical settings. The nature of the simulator equipment is expected to help students become familiar with animal anatomy and physiology and to avoid costs otherwise incurred by retrofitting to accommodate live animals. Revenue generated by tuition and fees is planned to be better spent fostering and maintaining educational partnerships with the community's animal care facilities.

Affiliations and Partnerships

Articulation agreements with technical high schools and with bachelor degree programs are expected to be developed once the proposed program is approved. It is also planned that partnerships with MWCC's Workforce Diversity Pipeline Program and TRIO Grant program will extend to the ASVT program. In addition MWCC has received letters of support from three local Chapter 74 vocational high schools (Montachusett Regional, Worcester Technical and Nashoba Valley Technical).

MWCC has developed a Vet Tech Advisory Board which first met on January 27, 2016. A list of advisors and affiliations was included in the body of the proposal. The role of the Veterinary Technician Advisory Board is to advise, assist and support MWCC faculty and administration on the planning, operation, improvements, evaluation and job placement of the proposed ASVT program.

A letter of support from Becker College indicated a willingness to forge articulation agreements toward a BS degree once MWCC receives BHE approval. The transferability of credits was a significant factor in the curriculum design of the proposed program. In addition to Becker College, MWCC expects to pursue articulation opportunities with UMASS Amherst's Animal Science Major.

PROGRAM EFFECTIVENESS

GOAL	MEASURABLE OBJECTIVE	STRATEGY FOR ACHIEVEMENT	TIMETABLE
Students accepted to the ASVT Program. 16 students accepted per cohort.	75% of the ASVT students (12 of the 16) are retained	<ul style="list-style-type: none"> • Intrusive advising • Weekly communication with program director • Academic support / professional tutoring 	Cohort 1: January 2018 Cohort 2: January 2019 Cohort 3: January 2020
MWCC ASVT students gain the knowledge to continue and succeed in the ASVT Program	75% of the ASVT students (12 of the 16) are retained	<ul style="list-style-type: none"> • Assessment plan of program-level learning outcomes to occur “along the way” rather than only at the end of the program 	Cohort 1: January 2019 Cohort 2: January 2020 Cohort 3: January 2021
MWCC ASVT graduates pass the CVTE	70% or greater of first-time test takers will achieve a passing score on the CVTE	<ul style="list-style-type: none"> • Sample CVTE questions embedded in ASVT core curriculum • CVTE prep-classes (non-credit) taught by program director • Student-led CVTE study groups 	Cohort of graduates monitored annually
MWCC ASVT graduates will be gainfully employed as veterinary technicians (or related field)	90% or greater of MWCC ASVT graduates will be employed as vet techs (or in related field) within 12 months of graduation	<ul style="list-style-type: none"> • MWCC achieves and maintains accreditation • Endorsements from Advisory Board Members • MWCC Advisory Board to include an ASVT graduate who is gainfully employed • Strong ties with community partners • Clinical placements 	Cohort of graduates monitored annually
MWCC will achieve and maintain AVMA accreditation	Initial accreditation achieved	<ul style="list-style-type: none"> • Strict adherence to the AVMA CVTEA Accreditation Policies and Procedures 	Begin May 2019 <ul style="list-style-type: none"> • Annual evaluation reports required • Evaluation process repeated at five-year intervals
MWCC ASVT core curriculum will be recognized and accepted for transfer by four-	Transfer articulation agreements entered into with four-year schools 85% of MWCC	<ul style="list-style-type: none"> • MWCC Advisory Board to include faculty or staff from an AVMA approved four-year veterinary science 	Cohort of graduates monitored annually

year baccalaureate institutions	ASVT graduates who wish to transfer credits do so successfully	<ul style="list-style-type: none"> • program • MWCC Advisory Board to include MWCC Alumni who have successfully transferred to a four-year school • MWCC's Transfer Services will pursue and maintain active transfer agreements 	
MWCC's ASVT program will transfer- in credit for qualified high school graduates of Chapter 74 career vocational animal science programs	MWCC will complete and keep active Chapter 74 articulation agreements in animal science	<ul style="list-style-type: none"> • MWCC Advisory Board to include at least one educator from a career vocational technical high school offering an approved Chapter 74 animal science program 	Applicants for admission monitored annually

EXTERNAL REVIEW AND INSTITUTIONAL RESPONSE

The proposed program was reviewed by Julie Bailey, DVM, Dean of the School of Animal Studies and Natural Sciences, Allerton Chair of Animal Health Sciences and David Dion, BS CVT, Clinical Instructor in Veterinary Science and Animal Science, both at Becker College in Worcester MA³. The team found substantial documentation that the program meets an area of significant public need in MA. They also found an overall appropriate design of the program including a balance between general and major requirements, with clear learning objectives and a distributive model of connection to experiential learning in the field. The reviewers advised that strengthening the relationship between the program and experiential learning sites would be important to students developing competency in the essential skills required for accreditation. They further advised that The AVMA requires programs to report VTNE scores, which will be a source of feedback to MWCC in terms of the programs success.

MWCC responded by acknowledging the critical importance of maintaining, growing, and improving working professional relationships with externship sites. Proposed program leaders agree to engage in regular communication; include personnel from the sites on the Advisory Board; and create an assessment rubric for grading student performance. In addition MWCC provided 2 detailed samples of agreement of clinical affiliation for veterinary technician students and agreements between MWCC and Clinical Nursing sites. It is planned that these templates will be utilized for the experiential learning sites affiliated with the proposed program.

³ The external reviewers were approved by staff almost a year before the proposal was submitted. Reviewers are expected to be disinterested parties with no direct affiliation to the program. Staff determined that the external review was sufficiently critical despite the obvious shared interest and potential partnership between Becker and MWCC. Staff did not require an additional review of the program by a disinterested team in this instance.

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 **Applied Associate in Science in Veterinary Technology**.

ATTACHMENT A: CURRICULUM

Associate in Applied Science in Veterinary Technology		
Required (Core) Courses in the Major (Total # courses required = 21)		
Course Number	Course Title	Credit Hours
VET100	Introduction to Veterinary Technology	2
VET101	Anatomy & Physiology of Domestic Animals I	4
VET102	Anatomy & Physiology of Domestic Animals II	4
VET105	Veterinary Hospital Management and Procedures	2
VET110	Large Animal Medicine	4
VET115	Veterinary Parasitology	4
VET120	Animal Diseases	2
VET200	Domestic Animal Nutrition and Health	2
VET205	Veterinary Pharmacology	2
VET208	Veterinary Radiology	2
VET210	Veterinary Clinical Nursing Skills	4
VET215	Externship I	3
VET216	Externship II	3
VET218	Domestic Animal Behavior	2
VET220	Veterinary Clinical Laboratory Procedures	4
VET222	Laboratory Animal Medicine and Management	2
VET225	Surgical Nursing and Dentistry	4
	Sub Total Required Credits	50
Elective Courses (Total # courses required = 0)		
Distribution of General Education Requirements		
Attach List of General Education Offerings (Course Numbers, Titles, and Credits)		15 Gen Ed Credits
Arts and Humanities, including Literature and Foreign Languages:		3
<ul style="list-style-type: none"> • ENG 101: College Writing I 		
Mathematics and the Natural and Physical Sciences:		12
<ul style="list-style-type: none"> • MAT162: Intro to Functions and Modeling (4 credits) • BIO205: Microbiology (4 credits) • CHE107: General Chemistry (4 credits) 		
Social Sciences: n/a		0
Sub Total General Education Credits		65
Total number of courses required for the degree		21
Total credit hours required for degree		65

ATTACHMENT B: BUDGET

One Time/ Start-Up Costs	Annual Expenses				
Cost Categories		Year 1	Year 2	Year 3	Year 4
Personnel/Staff					
	Part Time/Adjunct Faculty: \$1300.00 per credit	\$18,200.00	\$59,800.00	\$59,800.00	\$59,800.00
\$31,537.33	Staff: Program Director Licensed Veterinarian or Veterinary Technician \$70,000.00 Year One/ \$72,100.00 Year Two, \$74,263.00 Year Three, \$76,491.00 Year Four, plus fringe @ .3516	\$94,612.00	\$97,450.36	\$100,373.87	\$103,385.24
	Part Time Clinical Site Coordinator: 15 hours per week/16 weeks Year One/32 weeks subsequent years @ \$21.85/hr Year One, \$22.51/hr Year Two, \$23.19/hr Year Three, \$23.88 /hr Year Four plus pt fringe at 1.66%	\$5,331.05	\$10,984.16	\$11,315.98	\$11,652.68
Instructional Materials, Library Acquisitions					
	IDEXX/ACT software/bi- annual license required	\$4,400.00		\$4,400.00	
	Annual disposable lab equipment	\$8,000.00	\$8,000.00	\$8,000.00	\$8,000.00

Facilities, clinical sites, marketing, other					
	Facilities/Space/Equip				
	Clinical site payments: \$150 /student/credit	\$0.00	\$14,400.00	\$14,400.00	\$14,400.00
	Marketing	\$1,000.00	\$500.00	\$500.00	\$500.00
\$3,000.00	AVMA Initial Application Fee		\$3,000.00		\$3,000.00
	Other (Specify)				
	TOTALS	\$131,543.05	\$194,134.52	\$198,789.85	\$200,737.91
One Time/Start- Up Support		Annual Income			
	Revenue Sources	Year 1: 16 Full Time	Year 2: 28 Full Time	Year 3: 28 Full Time	Year 4: 28 Full Time
Mass Skills Capital Grant \$340,781.00	Grants				
	Tuition: \$25.00 per credit hour	\$13,200.00	\$22,800.00	\$22,800.00	\$22,800.00
	Fees: \$ 182.00 College Fees per credit hour	\$96,096.00	\$165,984.00	\$165,984.00	\$165,984.00
	Departmental: ASVT Program Fee \$1700.00 per year FT (This charge replaces the LEM Fee of \$10.00 per credit)	\$27,200.00	\$47,600.00	\$47,600.00	\$47,600.00
	Loss of tuition and fees for students who articulate credits from high school: six students per year for six credits	-\$7,452.00	-\$7,452.00	-\$7,452.00	-\$7,452.00
	Other (specify) Additional Expenses per semester: \$50.00 registration fee/ \$100.00 technology fee/ \$20.00 student activity fee	\$2,720.00	\$4,760.00	\$4,760.00	\$4,760.00

		\$131,764.00	\$233,692.00	\$233,692.00	\$233,692.00
TOTALS					

ATTACHMENT C: FACULTY

Summary of Faculty 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	Sites where individual will teach program courses
TBD: Two or more adjuncts will be hired by October 1, 2017			ONE	ACADEMIC AFFAIRS	FULL-TIME PROGRAM	N/A	GARDNER
	<p><u>*All courses listed below are core courses:</u></p> <p>VET100 Introduction to Veterinary Technology VET101 Anatomy & Physiology of Domestic Animals I VET102 Anatomy & Physiology of Domestic Animals II VET105 Veterinary Hospital Management and Procedures VET110 Large Animal Medicine VET115 Veterinary Parasitology VET120 Animal Diseases VET200 Domestic Animal Nutrition and Health VET205 Veterinary Pharmacology VET208 Veterinary Radiology VET210 Veterinary Clinical Nursing Skills VET215 Externship I VET216 Externship II</p>						

	VET218	Domestic Animal Behavior
	VET220	Veterinary Clinical Laboratory Procedures
	VET222	Laboratory Animal Medicine and Management
	VET225	Surgical Nursing and Dentistry