

BOARD OF HIGHER EDUCATION
REQUEST FOR COMMITTEE AND BOARD ACTION

COMMITTEE: Academic Affairs

NO: AAC 14-53

COMMITTEE DATE: June 10, 2014

BOARD DATE: June 17, 2014

**APPLICATION OF MASSASOIT COMMUNITY COLLEGE TO AWARD THE
ASSOCIATE IN APPLIED SCIENCE IN VETERINARY TECHNICIAN PROGRAM**

MOVED: The Board of Higher Education hereby approves the application of **Massasoit Community College** to award the **Associate in Applied Science in Veterinary Technician degree**.

Upon graduating the first class for these programs, 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., Director for Educator Policy

BOARD OF HIGHER EDUCATION

June 2014

Massasoit Community College Associate of Applied Science in Veterinary Technician program

INTENT AND MISSION

The mission of Massasoit Community College (MCC) is to offer a wide range of quality, affordable associate degrees, certificates and short term programs to prepare students for employment and/or transfer to baccalaureate institutions and to promote the development of critical skills. The proposed Associate of Applied Science in Veterinary Technician (AASVT) program addresses this mission by preparing students for employment after graduation as well as providing a pathway for a Bachelor's Degree in Veterinary Technology. In addition, students can choose to use this program as a starting point to pursue a Bachelor's Degree in Animal Science or other agricultural degrees.

The intent of the proposed program is to provide students with the knowledge and skills to be able to enter the workforce as practicing Veterinary Technicians. The proposed program curriculum is designed to satisfy the requirements of the American Veterinary Medical Association (AVMA). Completion of the program will lead to licensure and prepare students to obtain employment as a Veterinary Technician. Students will also be prepared to pursue further education in the veterinary or animal sciences.

MCC plans to build off of an already strong partnership with Norfolk County Agricultural High School (NCA) located in Walpole, Massachusetts. MCC has been offering dual enrollment Spanish courses at NCA since 2009. Faculty and administration at both institutions came together to develop the proposed AASVT program to support MCC in designing the infrastructure to develop a veterinary technician program, and provide NCA with an enhanced opportunity to offer college and career opportunities to their students.

The proposed program has obtained all necessary governance approvals on campus and was approved by the Massasoit Board of Trustees on March 9th, 2011. The required letter of intent was circulated on November 25, 2013. No comments were received.

NEED AND DEMAND

National and State Labor Market Outlook

Data from the U.S. Bureau of Labor Statistics predicts a 52% growth in the demand for Veterinary Technicians nationally. In 2012, the Bureau identified the State of Massachusetts as being one of the top ten states with the highest number of Veterinary Technician jobs. The National Association of Veterinary Technicians and Assistants reports that, three quarters of its members hold an Associate's Degree, and have been working in the field for an average of 13 years. This data suggests that the establishment of a VT program will provide a stable career path for AASVT graduates.

A recent search of the job engine indeed.com revealed 49 openings for veterinary technicians in southeastern Massachusetts. These job vacancies are not readily accessible to local residents as no educational institutions in the southeastern portion of the state offer training as a veterinary technician.

Student Demand

MCC recognizes that the biomedical industry is growing steadily in southeastern Massachusetts which will position graduates of the proposed program for employment. MCC identified interest in the AASVT program through enrollment in its non-credit certificate for Veterinary Assistants. Since the program's inception in 2007 enrollment has grown from just 47 students to 140 students in 2013, with more students turned away due to the lack of space for this certificate. In addition, the partnership with NCA will provide a pathway for potential students to move into the proposed program from high school.

OVERVIEW OF PROPOSED PROGRAM

Duplication

According to the American Veterinary Medicine Association's website, there are four institutions in Massachusetts that offer accredited Veterinary Technology/Technician programs. They are Becker College in Leicester, MA, Mount Ida College in Newton, MA, Northshore Community College in Danvers, MA and Holyoke Community College in Holyoke, MA. As previously stated, none of the institutions are located in the southeastern region of the state.

ACADEMIC AND RELATED MATTERS

Admission

Students entering the veterinary technician program from NCA will be expected to have a GPA of 2.8, and have passed the dual enrollment general education courses that are offered at the high school. Students entering the program through enrollment at Massasoit Community College will need to have graduated from high school and have met the prerequisites for College Algebra and English Composition I with a passing score on Developmental Math and English placement test, and have passed Biological Principles I.

Program Enrollment Projection

Program Enrollment Projections, Associate's Program (# of students)				
	Year 1, 2015- 16	Year 2, 2016-17	Year 3, 2017-18	Year 4, 2018-19
New Full Time	15	30	30	30
Continuing Full Time	0	12	35	35
New Part Time	0	0	0	0
Continuing Part Time	0	0	0	65
Totals	15	42	65	65

Curriculum (Attachment A)

The curriculum for the proposed AASVT program is divided into four semesters and would require 68 credits for graduation. Sixteen credits would be core academic credits and the remaining 52 would be courses specific to the VT program, as specified by the AVMA. The first and second semesters focus on general education requirements and introductory vet tech courses such as Introduction to Veterinary Technology and Vertebrate Anatomy and Physiology I. The third and fourth semester's students are required to complete internships, both in the fall and the spring and will take more advanced vet tech courses such as Veterinary Pharmacology, Anesthesia and Surgery and Pathology.

Internships

The internship components will be supervised by the Director of the VT program. It is planned that the Director will be responsible to build relationships with local veterinary clinics as well as farms and research labs. It is also planned that the program will develop an advisory board comprised of licensed veterinarians and veterinary technicians, enrolled students, stakeholders and industry representatives. This advisory committee will function as a resource to develop and set benchmarks as well as assist in arranging internship positions and job opportunities for students.

RESOURCES AND BUDGET

Fiscal (Attachment B)

The proposed budget assumes a spring 2015 start date for the AASVT program. Tuition and fees expected from the program will initially be from the NCA students. Because these students will earn dual enrollment credits for some of their high school courses, the income from tuition and fees will not be as high. As the program opens to the general public, full tuition and fees will be paid for all credits in the program. NCA students are expected to receive mentoring and support from both high school and college faculty and it is anticipated that attrition will be very low as a result. Based on budget calculations, it is expected that the proposed AASVT program will require startup funds in the initial two years and become self-sustaining in years 3 and 4. MCC and NCA will seek grant funding to support the initial startup. It is also expected that the Science and Math division will contribute a total of \$10,000.00 over two years towards the purchase of equipment.

Two full-time faculty, consisting of a veterinary technician and a veterinarian, will be hired. One of these faculty will also serve as the director, and will manage the program and supervise internships. The director will be hired in year one, and the second full-time faculty member will be hired in year two. It is planned that the director will be assisted by a part-time administrative assistant. It is expected that adjunct faculty will be hired to teach additional courses in the program. MCC anticipates an increase from two adjunct faculty in the first two years, to nine as the program enrollment increases.

New resources for the library, to support the vet tech program will be purchased, along with consumable supplies needed for the hands-on, clinical and laboratory courses. Veterinary microbiology and parasitological equipment will need to be purchased for the

Canton campus. Adaptions to a vertebrate course will require some new equipment. Usage fees for clinical lab space will be paid yearly, and maintenance and upkeep will be needed on current equipment. There will be an initial cost to adapt the offsite clinical space for use by students, as well as providing and replenishing supplies needed by students at clinical sites. It is planned that the program will begin with a cohort of students at NCA, and that increased marketing will be needed in year one to prepare for the opening of the program to the general public. Following an initial campaign, advertising of the program will become a regular part of Massasoit's recruiting program.

Faculty and Administration (Attachment C)

The proposed program would be located within the Division of Science and Mathematics, and be supervised by the Dean of Science and Mathematics. A program director that meets the requirements of the AVMA will be hired in fall 2014. It is expected that one other fulltime faculty member will be hired. Faculty in the biology department with expertise in animal physiology, anatomy, and/or behavior will also teach courses. The current administrative staff of the Division of Science and Mathematics will provide administrative support for the proposed program.

Facilities, Library and Information Technologies

The proposed AASVT program is designed to take place in three locations; the core academic courses would be taught at the Canton Campus of MCC and at NCA for dual enrollment students. AASVT courses that require facilities for handling animals would be taught at NCA. It is planned that MCC will enter into an agreement with a local veterinary clinic to use its facilities for training, in accordance with AVMA guidelines for courses involving surgery, anesthesia, and radiology.

Students in the AASVT program will have access to the library in Canton, Brockton and the library at NAC. The library will provide students access to both print and electronic resources. In the proposed program budget, MCC has allocated funds to allow the purchase of veterinary specific resources, both print and online databases. These will be used to supplement the resources available through NAC, and will be based on needs and by AVMA requirements.

Affiliations and Partnerships

The proposed program was developed by MCC in partnership with NAC. A detailed Memorandum of Understanding (MOU) signed in October 2013, details the roles and responsibilities for each institution in the partnership. The MOU is set to expire and will be reviewed at the end of two years. Once the program is approved it is planned that an advisory committee will work to develop further resources and relationships in the veterinary industry in southeastern MA.

PROGRAM EFFECTIVENESS

Table 4. PROGRAM GOALS			
Goal	Measurable Objective	Strategy for Achievement	Timetable
1. 80% students will complete the program	1.1 graduation rate	1.1.1 Advising/Mentoring 1.1.2 Tutor support 1.2.1 Career Awareness	2013-2016
2. 80% students will achieve licensure	2.1 Performance on VTNE	2.1.1 Incorporation of exam expectations into course outcomes 2.1.2 Tutor support	2013-2016
3. Program receives AVMA accreditation	3.1 Evaluation by AVMA	3.1.1 Incorporation of AVMA criteria into program 3.1.2 Communication with AVMA about program 3.1.3 Review of program by advisory committee	2013-2016
4. Development of Internships	4.1 Number of businesses willing to host students	4.1.1 Development of relationships with businesses 4.1.2 Outreach through advisory committees	2013-2016

EXTERNAL REVIEW AND INSTITUTIONAL RESPONSE

The AASVT program was reviewed by Susan Newell, Doctor of Veterinary Medicine (DVM), Staff Radiologist, at Ocean State Veterinary Specialists in Rhode Island and Deborah Kochevar, DVM, PhD, DACVCP, Dean, Cummings School of Veterinary Medicine, Tufts University.

The team supports Massasoit's plans to seek accreditation by the AVMA's Committee on Veterinary Technician Education and Activities and stated that the proposed program is well-designed and closely follows the recommended curriculum design as laid out by the AVMA. General education and concentration requirements were recognized as appropriate for this degree and the core course sequencing into rigorous upper levels and internship experiences were thought by the review team to provide students with critical thinking, decision making and clinical applications of skills. The review team commended the innovative partnership between MCC and NAC and stated that this articulation would serve to place students well ahead in their training as well as provide flexibility and a pathway for students who choose to pursue a baccalaureate degree.

Two areas to consider improvements were noted by the review team. Syllabi for the proposed program could be strengthened by providing more thorough learning objectives and direct assessment of mastery and clinical competency could be enhanced by inclusion of an objective structured clinical exam or utilization of accountability tools like supervised clinical skills demonstration lists. Massasoit responded by stating that their syllabi along

with their course assessments will be updated to include a higher level of detail once the program is approved and key faculty members are hired.

STAFF ANALYSIS AND RECOMMENDATION

Staff thoroughly reviewed all documentation submitted by **Massasoit Community College** and external reviewers. Staff recommendation is for approval of the proposed **Associate in Applied Science Veterinary Technician** program.

ATTACHMENT A: CURRICULUM OUTLINE

Associate in Applied Science in Veterinary Technician

Required (Core) Courses in the Major (Total # courses required = 20)		
<i>Course Number</i>	<i>Course Title</i>	<i>Credit Hours</i>
BIOL	Mammalian Anatomy & Physiology I	4
VTSC	Introduction to Veterinary Technology	3
BIOL	Mammalian Anatomy & Physiology II	4
VTSC	Veterinary Clinical Methods I	4
VTSC	Veterinary Management	3
VTSC	Internship I	2
VTSC	Veterinary Parasitology & Microbiology	4
VTSC	Veterinary Imaging	3
VTSC	Veterinary Clinical Methods II	4
VTSC	Veterinary Pharmacology	3
VTSC	Internship II	2
VTSC	Large Animal Medicine and Management	3
VTSC	Lab animals and Exotics	3
VTSC	Veterinary Anesthesia and Surgery	4
VTSC	Veterinary Pathology	3
	Sub Total Required Credits	49
Elective Courses (Total # courses required = 0) (attach list of choices if needed)		
	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
Students will take ENGL 101 - English Composition I (3 credits); ENGL 102 - English Composition II (3 Credits); CHEM 151 – General Chemistry I (4 credits); MATH 203 – College Algebra (3 credits); PSYC 101 – General Psychology (3 credits) or PHIL 101 – Philosophy (3 credits)		
Arts and Humanities, including Literature and Foreign Languages		6
Mathematics and the Natural and Physical Sciences		7
Social Sciences		3
Sub Total General Education Credits		16
Curriculum Summary		

Total number of courses required for the degree	20
Total credit hours required for degree	65
<i>Prerequisite, Concentration or Other Requirements: BIOL 121 – Biological Principles I – Prereq. For Vertebrate Anatomy and Physiology I and II.</i>	

ATTACHMENT B: BUDGET

<i>One Time/ Start Up Costs</i>	<i>Cost Categories</i>	<i>Annual Expenses</i>			
		<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>
	Full Time Faculty (Salary & Fringe)	\$65,000.00	\$127,800.00	\$132,300.00	\$137,000.00
	Part Time/Adjunct Faculty (Salary & Fringe)	\$14,300.00	\$14,800.00	\$69,100.00	\$72,000.00
	Staff	\$33,400.00	\$34,400.00	\$35,500.00	\$36,500.00
	General Administrative Costs	\$1,000.00	\$1,100.00	\$1,100.00	\$1,200.00
\$10,000.00	Instructional Materials, Library Acquisitions	\$6,000.00	\$6,000.00	\$6,200.00	\$6,400.00
\$80,000.00	Facilities/Space/Equipment	\$15,000.00	\$15,000.00	\$16,000.00	\$17,000.00
\$10,000.00	Field & Clinical Resources	\$6,000.00	\$6,000.00	\$6,200.00	\$6,400.00
\$500.00	Marketing	\$1,000.00	\$500.00	\$500.00	\$500.00
	Other (Specify)				
\$100,500.00	TOTALS	\$137,700.00	\$201,700.00	\$262,900.00	\$272,900.00

<i>One Time/Start-Up Support</i>	<i>Revenue Sources</i>	<i>Annual Income</i>			
		<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>
	Grants				
	Tuition	\$5,040.00	\$21,024.00	\$34,656.00	\$34,656.00
	Fees	\$36,390.00	\$151,104.00	\$248,806.00	\$248,806.00
\$5,000.00	Departmental	\$5,000.00			
	Reallocated Funds				
	Other (specify)				
\$5,000.00	TOTALS	\$46,430.00	\$172,128.00	\$283,462.00	\$283,462.00

ATTACHMENT C: FACULTY FORM

Summary of Faculty who will teach in the proposed program. Please list full-time faculty first, alphabetically by last name. Add additional rows as necessary.

Summary of Faculty Who Will Teach in the Proposed Veterinary Technician Program at Massasoit							
Please list full-time faculty first, alphabetically by last name. Add additional rows as necessary.							
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
Brown, Douglas Ph.D. Molecular Microbiology Dean of Science and Mathematics	<input type="checkbox"/>	• Veterinary Parasitology and Microbiology (C)	(1)	Evening	Part-Time	Yes Science and Mathematics	• Canton Campus
Simmons, Marc M.Sc Zoology Professor of Biology	<input checked="" type="checkbox"/>	• Vertebrate Anatomy I (C) • Vertebrate Anatomy II (C)	(1) (1)	Day	Part-Time	Yes Biology	• Canton Campus • Norfolk Ag. HS
Twomey, Kendra Ph.D. Organic Chemistry Professor of Physical Science	<input checked="" type="checkbox"/>	• General Chemistry I	(1)	Day	Part-Time	Yes Physical Science	• Canton Campus
Andrea Torres M.Sc. Mathematics Professor of Mathematics	<input type="checkbox"/>	• College Algebra	(1)	Day	Part-Time	Yes Mathematics	• Norfolk Ag. HS