Maine Community College System
Program Review

Central Maine Community College Life Science

October 2017 Date Reviewed

I. Cohort Enrollment Data:

		Cohort of 2012											0
Cohort status as of:	Graduated		Transferred		Matriculated / enrolled in the same program		Matriculated / enrolled in a different program		Graduated Other Program		Not attending this term	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
10/15/12	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
10/15/13	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
10/15/14	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
10/15/15	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
10/15/16	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

		Cohort of Fall 2013											0
Cohort status as of:	Graduated		Transferred		Matriculated / enrolled in the same program		Matriculated / enrolled in a different program		Graduated Other Program		Not attending this term	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
10/15/13	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
10/15/14	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
10/15/15	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
10/15/16	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

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		Cohort of Fall 2014	0

Cohort status as of:	Graduated		Transferred		Matriculated / enrolled in the same program		Matriculated / enrolled in a different program		Graduated Other Program		Not attending this term	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
10/15/14	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
10/15/15	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
10/15/16	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

		Cohort of Fall 2015	18

Cohort status as of:	Graduated		Transferred		Matriculated / enrolled in the same program		Matriculated / enrolled in a different program		Graduated Other Program		Not attending this term	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
10/15/15	1	6%	3	17%	12	67%	1	6%	1	6%	0	0%
10/15/16	9	50%	3	17%	2	11%	1	6%	0	0%	3	17%

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		Cohort of Fall 2016	37

Cohort status as of:	Graduated		Transferred		Matriculated / enrolled in the same program		Matriculated / enrolled in a different program		Graduated Other Program		Not attending this term	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
10/15/16	0	0%	0	0%	23	62%	7	19%	0	0%	0	0%

II. Key Indictor Data from *Most Recent Reporting Year*

Program Capacity (2014): 40

2009-2011 Program Graduates Employed:

Academic Years	2009-2011
CIP Family	26
Credential Type	Associate in Science
School Name	CMCC
Area of Study	Life Science
# of Completers	
Number of Completers with any Wage Data	
% of Completers with any Wage Data	
# of Completers With First Year Earnings	
Avg First Year Earnings	

Key Terms for Program Review (subject to amendment based on VFA final measures):

Cohort: The group of students matriculated for the first time in this program of study as of October 15 each year.

Total Enrollment: Includes full-time and part-time degree-seeking students.

Graduation: This is determined to be the date of the first award received by the students within five years.

Transfer: This is the matriculation of a student in another 2-year or 4-year institution prior to graduation.

Changed Program: The student leaves the program, but enrolls in another program within the same institution.

Still Enrolled: The student continues to be enrolled in the program at the end of the period and has not yet received a credential.

Program Capacity: This equals the slots available to first year students in the fall of the year and enrollment of first year students in the program. Some programs (i.e. nursing) have a curriculum spread over two years, so their capacity reporting will vary.

Graduates Employed: The most recent class of graduates for which data is available.

Graduates Continuing Education: The most recent class of graduates for which data is available.

III. Life Sciences:

Brief Program Description (*from 2016-17 college catalog*):

The Associate in Science Degree in Life Sciences is designed to provide students with a broad survey of scientifically accumulated knowledge. Students completing this degree could enter the workforce as scientific technicians or transfer into science, technology, engineering and math (STEM) majors at baccalaureate institutions with a primary focus on biological and life sciences. The A.S. in Life Science degree provides appropriate course sequencing for efficient transfer, reinforces and deepens core learning across the curriculum, and supports and strengthens the STEM infrastructure of the College.

Program Educational Outcomes

- Demonstrate knowledge of the major chemical and biological topics in Life Sciences.
- Effectively communicate about scientific ideas, assumptions, observations and results in oral and written format.
- Demonstrate critical thinking and problem-solving skills by applying scientific principles.
- Use of appropriate laboratory procedures to generate and analyze quantitative and qualitative data to form conclusions.
- Demonstrate the safe and proper use of scientific instrumentation, measuring devices, chemical reagents, media and tools to collect relevant and quality data.
- Understand the relationship of the Life Sciences to other areas of study and be able to make informed ethical choices.

Strengths:

- The Life Sciences program has created an avenue to recruit a type of student who at one time did not consider CMCC as a viable college option.
- A team of three full-time faculty members with diverse backgrounds and knowledge in life sciences areas instruct in the program and advise students.
- The Life Sciences program has a state-of-the-art organic chemistry lab as well as newly renovated biology labs.
- Through a generous donation from the Betterment Foundation, an Honors Program was created for Life Sciences students. The Honors Program has created a true cohort experience for members because students take courses together as well as participate in extracurricular activities as a group. The Honors Program students and coordinator have traveled and presented at regional and national conferences, one in Pittsburgh in April 2017 and one in Atlanta in November 2017. Honors Program students have also visited symposiums at institutions such as Harvard University and the University of Southern Maine. In addition, they host on-campus events and sponsor a monthly guest lecture series open to all CMCC students.
- There are 16 articulation agreements in place with the University of New England, Husson University and the University of Southern Maine. Two graduates enrolled directly into the pharmacy doctoral program at UNE.
- Anatomy and Physiology I and II Lecture and Lab are offered on ground and online. These courses are the cornerstone of many life sciences transfer programs.
- The program enrolled 18 students in the first year and then doubled enrollment to 37 students in the second year.

Challenges:

- The curriculum was found to be too restricted for students going into fields other than medicine, dentistry or pharmacology. Therefore, the College redesigned the curriculum layout to emphasize the various course options students can take in order to meet their goals.
- Students wishing to pursue careers as dental hygienists have found they do not need to complete the rigor required in the Life Sciences program in order to transfer. This is most often the case with math because more math is required in the Life Sciences program than is required in dental hygiene programs and 4-year

institutions. The College is reviewing viable options for a dental hygiene pathway that will satisfy MCCS Policy 302 Criteria for Academic Credentials, federal financial aid requirements but will not water down the program.

Planned Steps for Continuous Improvement:

- Consider options for how the program can be laid out to meet the variety of career paths in the life sciences while upholding the rigor and requirements that are required.
- Continue to use and improve the rubrics developed by MCCS faculty for the Block Transfer Agreement in lab courses.