

Five Year Program Review

College: Central Maine Community College  
 CIP: 11.001

Program: Computer Technology  
 Credentials: Associate in Applied Science (AAS)  
Associate in Science (AS)

Review Team: Christopher Thoma, Eric Berg, Brianna Doyle, Rachel King, Andrew Huguen, Sarah Pierce, Erin Nason, Kevin Cook, Jeffrey Green

Date: September 2023

Period of Review: AY 2017/2018-2021/2022

**Program Overview:**

1) **Program description** *(from the most recent college catalog):*

The Computer Technology program offers two degree options: the Associate in Science or the Associate in Applied Science. The Associate in Science degree is designed to articulate with the final two years of undergraduate study at institutions offering the baccalaureate degree, while the Associate in Applied Science degree focuses on preparation for entry into the workforce. Both programs are designed to provide individuals with knowledge of computing in the PC environment while developing specific diagnostic, repair, installation, network and programming skills. This program prepares students for industry certifications such as CompTIA A+ce, CompTIA Net+ce and CompTIA Linux+ce.

2) **Program Learning Outcomes: all program learning outcomes are expected to be assessed within the five-year cycle. Please attach an Assessment Data and Reflection Template for each program learning outcome. Explain how the department used the assessment results to improve teaching, learning, and the curriculum.**

List the program learning outcomes:	Method of assessment: list the courses and activities/assignments used to assess the learning outcomes
<ol style="list-style-type: none"> <li>1. Demonstrate an understanding of computing technologies and terminology for industry employment.</li> <li>2. Accurate and appropriate use of industry terms and representation of materials based on intended audiences.</li> <li>3. Practice good work habits and attitudes including: responsibility, cooperation, teamwork and ethical behavior.</li> <li>4. Analyze problems and take corrective action to maintain information technology systems.</li> <li>5. Continue education through conferences, industry certifications, courses, and/or enrolling in other degree programs.</li> <li>6. Develop an area of expertise while analyzing career opportunities vs. individual strengths.</li> </ol>	Please see attached 5-Year Assessment Plan.

3) **Credentials Awarded within the IPEDS year, i.e. July 1-June 30:**

<b>Credentials Awarded</b>						
Credential	AY1718	AY1819	AY1920	AY2021	AY2122	AY2223
AAS	14	10	5	5	2	7
AS	11	2	2	2	1	2

4) **Program Graduates Employed:**

Number of Completers with any Wage Data	60
% of Completers with any Wage Data	85%
# of Completers with First Year Earnings	35
Median First Year Earnings	\$37,397

5) **Partnerships, collaborations, associations and memberships**

a) **Advisory Meeting Dates and Attendance (past 3 years)**

<i>Date(s) of Meeting</i>	<i># of college attendees</i>	<i># of Non-college attendees</i>
11/18/20	2	2
11/4/21	2	2
4/14/22	3	2

b) Program external accreditation, associations, and memberships (if applicable): N/A.

6) **Other Indicators of student success, direct and/or indirect, which may include:**

	AY1819	AY1920	AY2021	AY2122	AY2223
Licensure/certification pass rates (if applicable)	n/a	n/a	n/a	n/a	n/a
<b>Program Advisory Committee Member Survey</b>					
Program Curriculum	--	--	--	--	4
Technical currency of the program	--	--	--	--	4
Preparation of program graduates for work in the field	--	--	--	--	4
Communication from program administration/faculty	--	--	--	--	4
Overall quality of the program	--	--	--	--	4
Other (please specify):	--	--	--	--	--

\* -- no survey data available

\*\* only 2 responses/1 completer of survey- July/August 2023

7) Student demographics:

Admissions					
AAS	AY1819	AY1920	AY2021	AY2122	AY2223
Fall Applications	64	62	119	97	112
% chg in Fall Applicants from PY	--	-3%	92%	-18%	15%
Enrolled (Yield)	15	16	20	29	19
% chg in Enrolled from PY	--	7%	25%	45%	-34%
AS	AY1819	AY1920	AY2021	AY2122	AY2223
Fall Applications	36	28	12	18	31
% chg in Fall Applicants from PY	--	-22%	-57%	50%	72%
Enrolled (Yield)	12	9	4	6	8
% chg in Enrolled from PY	--	-25%	-56%	50%	33%

Student Enrollment <sup>1</sup>					
AAS	AY1819	AY1920	AY2021	AY2122	AY2223
Unduplicated Headcount Enrolled in Program	41	39	42	41	36
% chg in Headcount from PY	--	-5%	8%	-2%	-12%
Enrolled Credit Hours	403	367	379	432	373
% chg in Credit hours from PY	--	-9%	3%	14%	-14%
FTE	27	24	25	29	25
% chg in FTE from PY	--	-11%	4%	16%	-14%
AS	AY1819	AY1920	AY2021	AY2122	AY2223
Unduplicated Headcount Enrolled in Program	28	27	23	20	22
% chg in Headcount from PY	--	-4%	-15%	-13%	10%
Enrolled Credit Hours	303	325	232	192	229
% chg in Credit hours from PY	--	7%	-29%	-17%	19%
FTE	20	22	15	13	15
% chg in FTE from PY	--	1%	-32%	-13%	15%

<sup>1</sup> = students within the program in the fall of the academic year

Student Success						
Cohort Year - AAS	AY1718	AY1819	AY1920	AY2021	AY2122	AY2223
Cohort Enrollment	28	25	26	26	29	25
Retained to the next semester	43%	48%	58%	50%	45%	36%
Retained to the next year	36%	28%	35%	27%	31%	
100% of program time	18%	4%	8%	8%	3%	
150% of program time	25%	8%	8%	15%		
200% of program time	25%	8%	8%			
Transfer Rate (non-graduates) <sup>2</sup>	7%	16%	19%			
Transfer Rate (graduates)	0%	0%	0%			
Enrolled in Another Program <sup>2</sup>	7%	0%	--			
Graduated from Another Program <sup>2</sup>	7%	4%	15%			
Cohort Year - AS	AY1718	AY1819	AY1920	AY2021	AY2122	AY2223
Cohort Enrollment	14	18	19	10	16	19
Retained to the next semester	57%	50%	37%	60%	63%	42%
Retained to the next year	50%	44%	37%	50%	19%	
100% of program time	14%	0%	11%	0%	6%	
150% of program time	21%	0%	11%	0%		
200% of program time	21%	0%	11%			
Transfer Rate (non-graduates) <sup>2</sup>	21%	28%	26%			
Transfer Rate (graduates)	0%	0%	11%			
Enrolled in Another Program <sup>2</sup>	0%	17%	--			
Graduated from Another Program <sup>2</sup>	0%	6%	16%			

<sup>2</sup>. Determined at the maximum graduation point in this table, i.e. 200%

**8) Strengths, challenges, and planned steps for continuous improvement: In your summary assessment you should reference sections of this review that informs the plan.**

**Program Strengths:**

- The program is in high demand and is experiencing growth.
- CPT is customized to align with industry certifications. Upon successful course completion, students are equipped to confidently sit for certification examinations with Workforce Development. Students can test here at CMCC in our Testing Center. Certifications include CompTIA A+ce, CompTIA Net+ce and CompTIA Linux+ce.
- A substantial portion of graduates, especially in the AAS degree, secure employment within the field upon program completion. Students in the AS degree often transfer, and CMCC has articulation agreements with USM, UMFK, Husson University, and Northeastern University.

**Challenges:**

- Sustaining enrollment into the subsequent academic year could be negatively influenced by the structure of the degree program. We are working on ways to simplify the program structure and clarify program-specific advising for students going into the second year.
- Students sometimes do not persist past the completion of first-year coursework due to employment and the current high demand for employees in IT.
- Increased enrollment has necessitated the program to creatively schedule classes to ensure sufficient access to on-campus computer equipment for enrolled students.
- Students ask for more tutoring in CPT courses than is currently available in the Math/Science Center or through TRIO.

**Planned steps for continuous improvement:**

- Continue to work with students and the COMP TIAA network to get certifications completed during their program, and speak regularly with students about the advantages of completing the two-year degree.
- Continuously review and update the Computer Technology Program's curriculum to reflect the most current industry practices and technologies, and actively advise students into the best courses for them to ensure on-time program completion.
- Integrate case studies and projects into the CPT curriculum that simulate the challenges students may face in the real world.
- Recruit high-performing CPT students into tutoring CPT courses for the Math/Science Center and/or TRIO program.
- Build a deeper bench of highly qualified and certified adjunct instructors to teach the CPT curriculum, and encourage instructors to pursue continuous learning and professional development to stay up to date with current practices in the field.
- Continue to leverage partnerships with IT industry associations and local businesses to gain insights into industry trends, job market demands, and emerging technologies. These partnerships also help connect students to internship opportunities in the field.

Five-year Assessment Plan for Student Learning Outcomes

Computer Technology

September 2023

Name of Program or General Education Domain

Date

Learning goal:

Student learning outcomes:	Academic year during which assessment will occur	Source(s) and type of assessment artifact(s) that will be collected (e.g.: embedded questioning, capstone assignments, standardized testing, performance observation, portfolio reviews, etc.)	Method(s) to be used for assessing artifact(s)	Assessment Goal (targets/criteria) for direct measure	Assessment Outcome (Number of Students Achieving an "acceptable" or better)	Assessment Goal was:		
						Met	Not Met	Pending Review
Demonstrate an understanding of computing technologies and terminology for industry employment.	Fall Term, Spring Term	Assignments, Exams, in class activities, Capstone	Evaluation and Feedback of assignments	75% of students will earn a C or better in the following courses, to achieve the outcome: CPT 227, CPT 147, CPT 201, CPT 235, CPT 266, CPT 271, CPT 298	372 students scored a C or higher out of 493 students during AY 2122/2223	X 75.5%		
Accurate and appropriate use of industry terms and representation of materials based on intended audiences.	Fall Term, Spring Term	Assignments, Exams, in class activities, Capstone	Evaluation and Feedback of assignments	75% of students will earn a C or better in the following courses, to achieve the outcome: CPT 227, CPT 147, CPT 201, CPT 235, CPT	372 students scored a C or higher out of 493 students during AY 2122/2223	X 75.5%		

				266, CPT 271, CPT 298				
Practice good work habits and attitudes including: responsibility, cooperation, teamwork and ethical behavior.	Fall Term, Spring Term	Assignments, Exams, in class activities, Capstone	Evaluation and Feedback of assignments, completion of Capstone	75% of students will earn a C or better in the following courses, to achieve the outcome: CPT 127, CPT 130, CPT 245, CPT 250, CPT 227, CPT 147, CPT 201, CPT 235, CPT 266, CPT 271, CPT 298	451 students scored a C or higher out of 595 students during AY 2122/2223	X	75.8%	
Analyze problems and take corrective action to maintain information technology systems.	Fall Term, Spring Term	Assignments, Exams, in class activities, Capstone	Evaluation and Feedback of assignments	75% of students will earn a C or better in the following courses, to achieve the outcome: CPT 227, CPT 147, CPT 201, CPT 235, CPT 266, CPT 271, CPT 298	372 students scored a C or higher out of 493 students during AY 2122/2223	X	75.5%	
Develop an area of expertise while analyzing career opportunities vs. individual strengths.	Fall Term, Spring Term	Capstone	Complete of Capstone	CPT 298	23 students scored a C or higher out of 23 students during AY 2122/2223	X	100%	

Most significant assessment findings? (Pedagogical, instructional, curricular changes). Please report on actions taken and on ongoing assessment plans.

- The order in which students take first year CPT courses needs to be reexamined to ensure maximum student success.
- Students who successfully transition to the second year have high success rates with senior courses such as the Capstone.