

# STUDENT OUTCOMES COMMITTEE OF THE BOARD OF TRUSTEES

Thursday, April 7, 2022

1:00 p.m.

Hybrid

Zoom

&

West Philadelphia Regional Center

4725 Chestnut St.

Philadelphia PA 19139

Room 125

## AGENDA

(1) Public Session

(a) Approval of the Minutes of March 3, 2022 (A)

(b) Cybersecurity Academic Program Review (A)

- What changes in the Program have occurred as a result of assessment? Has continuous assessment taken place?
- What actions have been taken to address recommendations made in the last Program Review?
- To what extent does the Committee agree with the Program Review findings and recommendations?
- What is the Committee's action recommendation to the full Board?

Guests:

Chuck Herbert, Assistant Professor and Department Head of Computer Technologies

Sonny Chang, Assistant Professor, Cybersecurity & Network Technology

(c) Network Administration Academic Program Review (A)

- What changes in the Program have occurred as a result of assessment? Has continuous assessment taken place?
- What actions have been taken to address recommendations made in the last Program Review?
- To what extent does the Committee agree with the Program Review findings and recommendations?
- What is the Committee's action recommendation to the full Board?

Guests:

Chuck Herbert, Assistant Professor and Department Head of Computer Technologies

Sonny Chang, Assistant Professor, Cybersecurity & Network

(d) CCRC KPI Data for Guided Pathways

(D)

Focus of Discussion:

- Overview of CCRC Momentum KPI Model
- College Data Trends for Last 5 Years
- Program Drivers for Improvement

(e) Catto Scholarship Update

(I)

Focus of Discussion:

- Update on Enrollment, Student Progress and Retention

Guest:

Dr. April Voltz, Executive Director, Catto Scholarship

(f) New Business

**Attachments:**

Minutes of March 3, 2022

Cybersecurity APR Document

Network Administration APR Document

AACC Pathways Project/CCRC Data

Catto Scholarship Outcomes Document

Student Outcomes Agenda Calendar

Pathways 2021-2022 Academic Pathways

**STUDENT OUTCOMES COMMITTEE OF THE  
BOARD OF TRUSTEES**

**MINUTES**

**Thursday, March 3, 2022**

**1:00 p.m.**

**Zoom**

**Presiding:** Ms. Fulmore-Townsend

**Committee**

**Members:** Mr. Clancy, Ms. McPherson, Ms. Posoff

**Board**

**Participants:** Mr. Bradley, Mr. Epps, Mr. Soileau

**College**

**Members:** Ms. de Fries, Ms. Di Gregorio, Dr. General, Dr. Hirsch, Ms. Liautaud-Watkins, Dr. Roberts, Dr. Rooney, Dr. Thomas

**Cabinet**

**Members:** Dr. Zanjani

**Guests:** Dr. Adanu, Dr. Carter, Mr. Coleman, Ms. Henk, Ms. Lello, Dr. Lipscomb, Ms. McGarry, Ms. Scicchitano, Dr. Shah, Dr. Shannon, Ms. Washington

**(1) Executive Session**

There were no agenda items for the Executive Session.

**(2) Public Session**

**(a) Approval of the Minutes of February 3, 2022**

The minutes were approved unanimously.

**(b) Career and Advanced Technology Center (CATC) - The Student Experience**

Dr. Hirsch provided background information on the CATC (see attached PowerPoint presentation). By building the new structure, the College can provide an open space complete with amenities that matches the quality of the College's academic programs. Ms. Washington, Executive Director of the CATC, and Ms. de Fries reiterated what Dr. Hirsch said, with Ms. de Fries explaining that the student experience was discussed extensively with the architects and how to allow the activities within the building to be easily visible to those both in and outside the building. It is important for students to see the institution is not just providing class-based instruction, but also hands-on skills-based training. The building encompasses collaborative and

individual work spaces and provides faculty offices near the innovation spaces. The space will be open until 10 pm at least during the week, open on the weekends, and potentially open more for shift work that partners may have. Dr. Rooney explained the extensive marketing planned; they have been preparing television ads, posters for high schools, mailers, an entire cadence of communications to the press, and there is already a web presence. Communication strategies address the community at large and also areas employers. Dr. Generals noted that he has spoken with many industries in the Delaware Valley, in addition to regular communications with SEPTA and other automotive employers. Ms. McPherson said that she could provide additional contacts, and Mr. Soileau said the media plan should be shared with the Board members so that they can amplify the message.

Dr. Carter discussed the role of the automotive technology programs in the CATC and how they intersect with advanced manufacturing programs (such as Welding) also housed in the building. She also mentioned the new automotive programs, including Toyota T-TEN, Alternative Fuels proficiency certificates, and the Medium-Heavy Truck programs. Local Toyota dealers have already offered to host over 45 students at their locations; with cohorts of 20 students, that provides spots for students in the first three years of the program. The new facility also allows students to focus on new autonomous and connected transportation technologies. Regarding compensation, Dr. Carter explained that students take ASE exams throughout the program, which can result in an average annual salary of \$55,000 (which is a conservative estimate). Toyota has said that they have graduates who within two years of finishing the program and continued training were making \$100,000. Now that the College has more space for experiential learning, the labs will simulate the real-world environment with equipment that graduates will be using in their future careers. With the new facilities, the program has been able to add partnerships; they already had Ford as a partner, Nissan and Subaru have already signed on, and the program is now vetting the Mopar group (GM, Fiat, etc.).

In regards to high school students, career-technical education programs and workforce readiness, it was noted that the College already works with the Philadelphia School District. The College's programs could be options not just for CTE students, but also students at comprehensive high schools; the marketing pipeline will focus on both. There will be regular outreach to and discussions with area high schools.

**(c) CCRC KPI Data for Guided Pathways**

This topic was postponed to the April meeting.

**(d) Enrollment Trends**

Dr. Adanu, Associate Vice President of Institutional Effectiveness, and Dr. Lipscomb, Associate Vice President for Enrollment Management, presented on enrollment trends (see attached PowerPoint presentation). Dr. Adanu provided the

context for both national trends and for Pennsylvania. Enrollment at Pennsylvania community colleges declined across the board from Fall 2011 to Fall 2020 by 27.7%, compared to 30.8% for Community College of Philadelphia. Nationwide, enrollment at large urban 2-year institutions fell by 24.8%; only three community colleges, all located in Texas, had increased enrollment. It was noted that, for the most part, four-year institutions have also seen decreased enrollment during this time period. Dr. Adanu provided 6-year enrollment data for programs at the College. Dr. Lipscomb discussed strategies to address enrollment going forward, including increasing yield. These include focusing on high-priority occupations, recruitment by Academic Pathway, stop-outs, Liberal Arts students and students who might not be sure of their major. High-priority programs are those with high applicant and enrollment numbers, such as Business programs, Health Care Studies, and Nursing. They are exploring how to shift students interested in these majors into other programs. They are making the transition from program-based recruitment events to a Pathways-based recruitment model, with Pathways-focused materials. Committee members indicated interest in seeing regular updates on the success metrics.

**(e) Health and Life Science Building**

Dr. Shah, Dean of the Math, Science, and Health Careers division, explained the ideas behind establishing an integrated health and life sciences building. New health care pedagogy revolves around real-world situations and simulations; to provide this, adequate labs are needed for all students. The pedagogy has changed with the Nursing program to a much more integrated approach; this new building would support moving this program forward even more. Dr. Hirsch noted that this building would share the same principles as the CATC: a structure characterized by openness that would be inviting to students. A goal is to break down brick barriers and have a building where one can look in and get a real sense of what health programs are about and how the College is preparing students for these fields. For example, while the College has the only Dental Hygiene program in the City and a full dental clinic, the clinic is difficult to find. With academic program reviews, there has been a common question for health care programs about how clinical space is needed for expanding programs; this new building will help address that issue. Dr. Generals explained that the Business Affairs committee is bringing forth a resolution to endorse the initial step of accepting state federal dollars.

**(f) New Business**

There was no new business.

**Next Meeting**

The next meeting of the Student Outcomes Committee of the Board is scheduled for April 7<sup>th</sup> at 1:00 p.m.

**Attachments:**

Minutes of February 3, 2022

Pre-College STEM Programming at Community College of Philadelphia  
Industry List in Pharma & Chem Areas  
Career and Advanced Technology Center-CATC Presentation  
Enrollment Trend Data Presentation  
Student Outcomes Agenda Calendar

# Community College *of* Philadelphia

## Academic Program Review: Cybersecurity (CYBR), A. A. S.

Authors: Sonny Chang, Chuck Herbert, Dr. Dawn Sinnott

Spr 2022

## Executive Summary

### A. Key Findings

#### Enrollment and Demographics

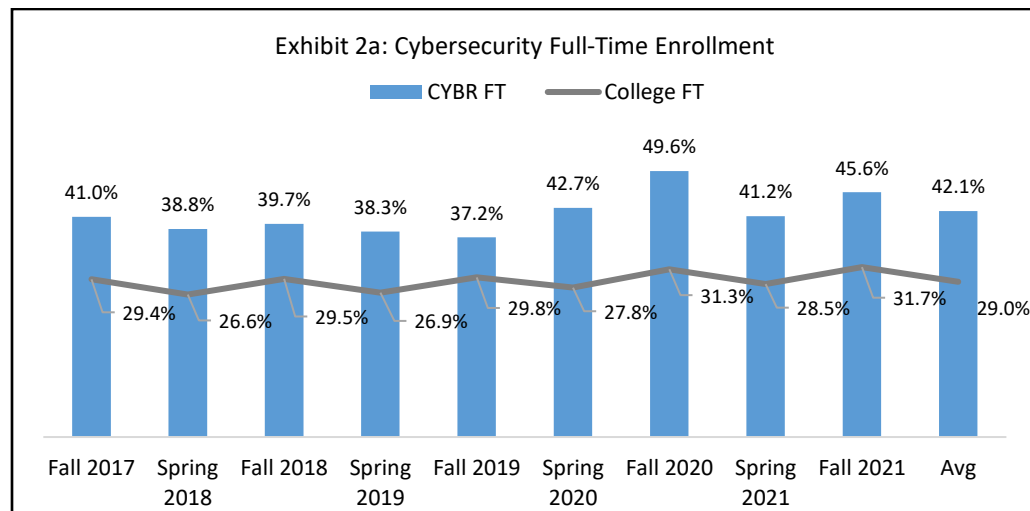
1. Over the period studied, the Cybersecurity program enrollments grew 164% from 39 to 103 enrolled students; see Exhibit 1

Exhibit 1: College and Program Enrollment <sup>1</sup>

	Fall 2017	Spring 2018	Fall 2018	Spring 2019	Fall 2019	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Average
College-Wide	17,296	16,503	16,671	15,544	15,996	14,789	13,673	12,195	11,647	14,924
Cybersecurity	39	49	78	81	94	96	115	102	103	84

2. Exhibit 2: Enrollment Demographics

- a. On average, the Cybersecurity program enrolled a higher proportion of full-time students (42.1%) than the College overall (29.0%). See exhibit 2a
- b. Age distribution for Cybersecurity students was similar to college-wide; both groups were more likely to be career age, between 22 and 39 years of age, Cybersecurity program averages 48% career age, College-wide average 49% career age. See exhibit 2b
- c. The Cybersecurity program enrollment is 73.7% male exceeding the College average of 31.6% male. The Cybersecurity program also has a higher percentage of Black males (27.8%), Hispanic males (10.2%), and White males (29.5%) than the College Black males (13.5%), Hispanic males (4.9%), and White males (8.6%). See exhibit 2c
- d. Nationally, 12.6% of all Network Engineers are women, while 83.4% are men. The Network Administration Program of 21% female consistently exceeds the national average. See exhibit 2d



<sup>1</sup> Enrollment and Retention Tables reflect students' primary major



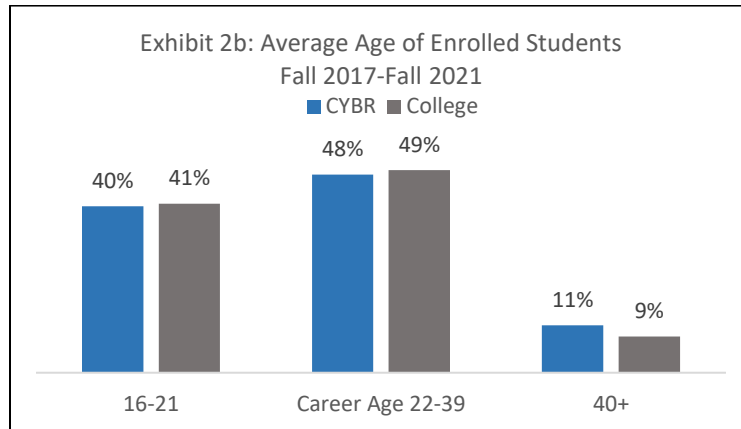
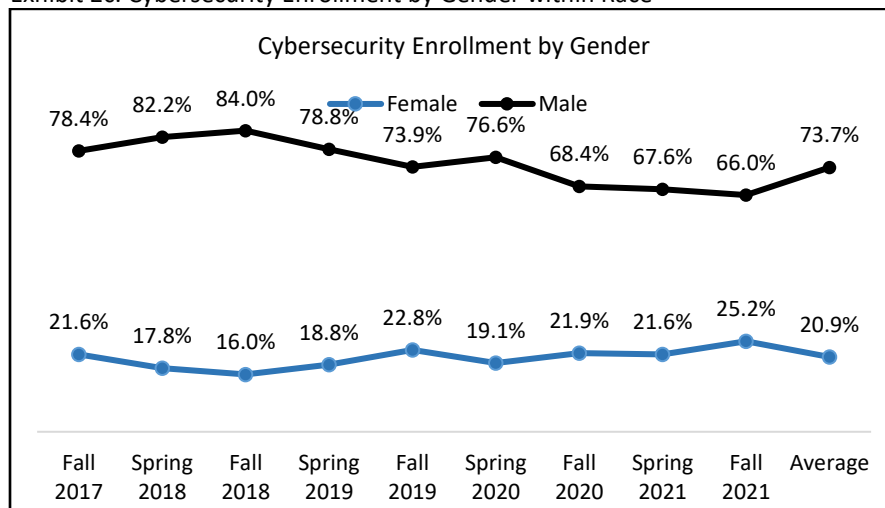


Exhibit 2c: Cybersecurity and College Enrollment by Gender within Race

		Fall 2017	Spring 2018	Fall 2018	Spring 2019	Fall 2019	Spring 2020	Fall 2020	Spring 2021	Fall 2021	CBYR Average	College Average
Asian	Female	0.0%	2.2%	2.7%	5.0%	3.3%	1.1%	0.9%	2.0%	3.9%	2.4%	5.6%
Asian	Male	8.1%	4.4%	16.0%	12.5%	7.6%	9.6%	7.9%	8.8%	11.7%	9.8%	4.6%
Black	Female	10.8%	8.9%	6.7%	7.5%	12.0%	11.7%	14.0%	14.7%	15.5%	11.9%	30.4%
Black	Male	32.4%	33.3%	28.0%	26.3%	30.4%	30.9%	25.4%	26.5%	23.3%	27.8%	13.5%
Hispanic	Female	8.1%	6.7%	5.3%	3.8%	2.2%	2.1%	3.5%	2.9%	2.9%	3.6%	10.4%
Hispanic	Male	13.5%	13.3%	12.0%	10.0%	8.7%	7.4%	10.5%	9.8%	10.7%	10.2%	4.9%
White	Female	2.7%	0.0%	1.3%	2.5%	5.4%	4.3%	3.5%	2.0%	2.9%	3.0%	14.4%
White	Male	24.3%	31.1%	28.0%	30.0%	27.2%	28.7%	24.6%	22.5%	20.4%	25.9%	8.6%
	Female										20.9%	60.8%
	Male										73.7%	31.6%

Exhibit 2c: Cybersecurity Enrollment by Gender within Race

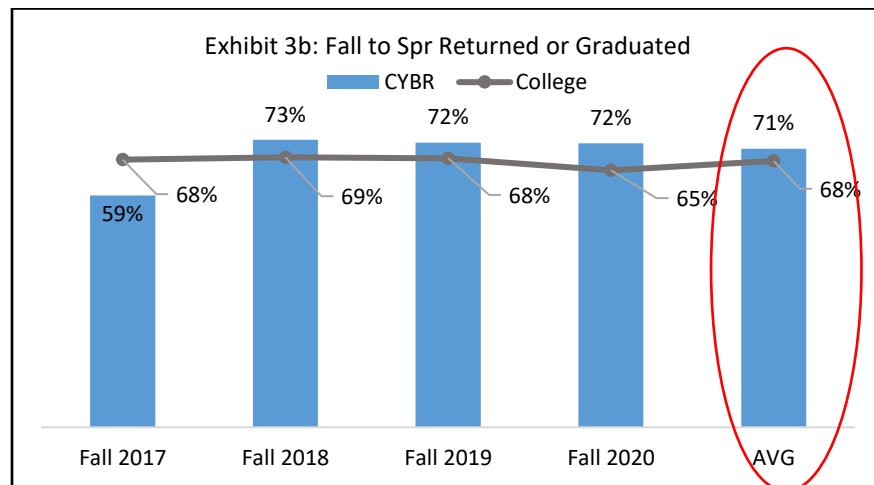


**Retention – Returned or Graduated**

- 3. Fall to Spring Retention between fall 2017 and fall 2020
  - a. Fall to spring same program retention: The percent of Cybersecurity program students returning to the same program in the spring is similar to the college-wide average; Cybersecurity average 67.8%, college-wide average 64.8%, see Exhibit 3a
  - b. Fall to spring same program retention or graduation: At 71%, the average proportion of Cybersecurity program students who returned or graduated from fall to spring averaged three points higher than the College average (68%), See exhibit 3b

Exhibit 3a: Fall to Spring Retention <sup>2</sup>

	Fall 2017	Fall 2018	Fall 2019	Fall 2020	CYBR Average	College Average
Headcount	39	78	94	115	82	15,909
Returned to Same Program	59.0%	71.8%	67.0%	68.7%	67.8%	64.8%
Returned to Different Program	12.8%	6.4%	7.4%	4.3%	6.7%	4.4%
Graduated	0.0%	1.3%	5.3%	3.5%	3.1%	2.9%
Did Not Persist	28.2%	20.5%	20.2%	23.5%	22.4%	27.9%



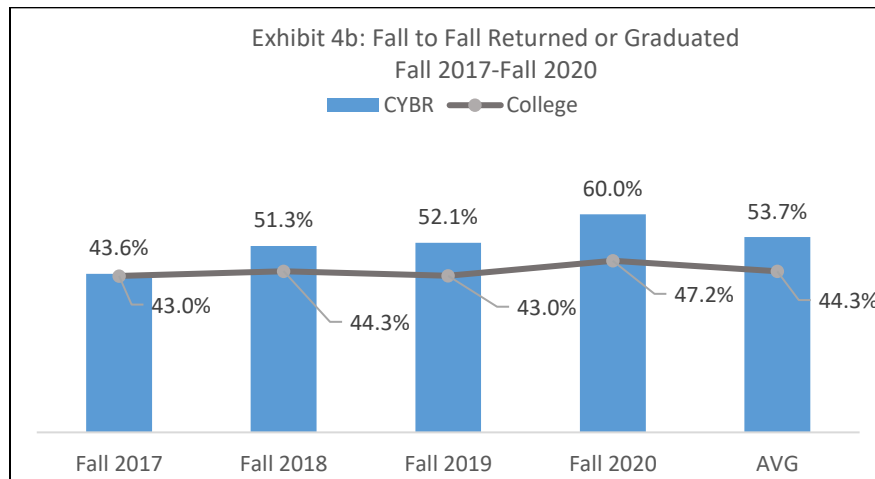
<sup>2</sup> Enrollment and Retention Tables reflect students’ primary major

4. Fall to Fall Retention between fall 2017 and fall 2020

- a. Fall to fall same program retention: The Cybersecurity program continued to outpace the College average of 34.2% retention, with an overall average of 39.0% persisting to the following fall, see Exhibit 4a
- b. Fall to fall same program retention or graduation: The average proportion of Cybersecurity program students who returned or graduated from fall to fall has increased steadily from 43.6% in fall 2017 to 60% in fall 2020, see Exhibit 4b

Exhibit 4a: Fall to Fall Retention <sup>3</sup>

	Fall 2017	Fall 2018	Fall 2019	Fall 2020	CYBR Average	College Average
Headcount	39	78	94	115	82	15,909
Returned to Same Program	35.9%	39.7%	37.2%	40.9%	39.0%	34.2%
Returned to Different Program	5.1%	5.1%	7.4%	8.7%	7.1%	7.2%
Graduated	7.7%	11.5%	14.9%	19.1%	14.7%	10.1%
Did Not Persist	51.3%	43.6%	40.4%	31.3%	39.3%	48.5%



<sup>3</sup> Enrollment and Retention Tables reflect students' primary major

## Success and Graduation

5. The Cybersecurity program awarded a total of 47 degrees between 2017 and 2022, see Exhibit 5a

Exhibit 5: Degrees Awarded in Cybersecurity and all AAS Degree Programs <sup>4</sup>

	2017	2018	2019	2020	2021	Total
Cybersecurity	17	1	11	12	6	47
AAS Degrees	587	530	558	482	241	2,398

The number of degrees awarded does not necessarily reflect fall enrollment patterns as students may enroll in a second major that is not reflected in the enrollment and retention tables.

## Transfer

6. Cybersecurity is an A.A.S. degree program. The focus of this program is workforce; however, opportunities, responsibilities, and salaries increase with continued education. More than 10% (18 out of 174) of the students departing the college elected to transfer; 17% enrolled at Temple University, 11% enrolled at Drexel, and 12% enrolled at Pierce, see Exhibit 6

Exhibit 6: Departing CYBR Students who entered the College between 2017 and 2020

Exit Status	Transfer		Did Not Transfer		Total Count of Departing Students
	Count	Percent	Count	Percent	
Graduate	2	8%	23	92%	25
Earned 45 or more credits	0	0%	15	100%	15
Earned 23 to 44 credits	3	10.7%	25	89.3%	28
Earned 12 to 22 credits	3	8.8%	31	91.2%	34
Earned less than 12 credits	10	13.9%	62	86.1%	72
Grand Total	18	10.3%	156	89.7%	174

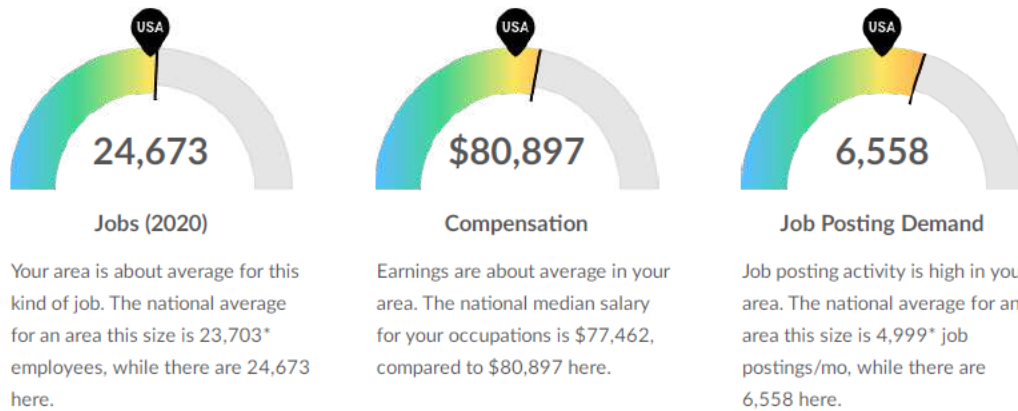
## Workforce Development

7. The most recent data finds employment opportunities in the fields related to cybersecurity are high. An average area of this size typically has 23,703 employees, while there are 24,673 here in the Philadelphia area. Job posting demand is high and appears to exceed resources. The relevant occupations include:

<sup>4</sup> The number of degrees awarded does not necessarily reflect fall enrollment patterns as students may enroll in a second major that is not reflected in the enrollment and retention tables.

Network and Computer Systems Administrators
Computer Network Support Specialists
Information Security Analysts
Computer Network Architects
Computer Systems Analysts
Computer User Support Specialists
Operations Research Analysts

### Aggressive Job Posting Demand Over an Average Supply of Regional Jobs



Most Jobs are found in the Computer Systems Design and Related Services Industry Sector	
Computer Systems Design and Related Services	18.1%
Management of Companies and Enterprises	8.9%
Wired and Wireless Telecommunications Carriers	6.0%
Insurance Carriers	5.2%
Colleges, Universities, and Professional Schools	4.7%
Management, Scientific, and Technical Consulting Services	4.1%
Other	53.0%

Top Companies in the Philadelphia Area	
The Judge Group	
Deloitte	
Motion Recruitment	
Oracle	
Robert Half	
IBM	
Accenture	
Comcast	
Wells Fargo	
General Dynamics	

**Assessment**

10. Assessment data has been collected regularly; in AY 2020, all seven Cybersecurity program learning outcomes were assessed using AEFIS; before implementing AEFIS, assessment data was collated from data in Canvas by faculty members for each course in the program. The program has defined appropriate learning outcomes, selected assessment measures, assessed the learning outcomes, and collected data. The next step, analyzing the results of the outcomes assessed, is not presented in the evidence. It is important to analyze and report the results of the assessments in a meaningful way. Analyzing the results should then be followed by adjustments to improve learning and reassessed in an appropriate interval to close the loop. These steps are fundamental to the assessment process; if the results do not lead to adjustments, improvements, or confirmation of prior adjustments, the cycle does not support continuous improvement.

Prior Audit

This is the first Academic Review for the Cybersecurity A.A.S. Degree Program

The Community College of Philadelphia A.A.S. *in Cybersecurity* was established during the 2016-2017 AY and implemented beginning with the Fall 2017 Semester.

C. Action Items

The Office of Assessment and Evaluation makes the following recommendations.

**Enrollment and Demographics**

1. Increase Enrollment as follows:

	Fall 2020 (Bench- mark)	Fall 2022 Increase in Headcount*		Fall 2024 Increase in Headcount		Fall 2026 Increase in Headcount	
<b>Headcount</b>	115	122	6%	137	12%	153	12%
<b>Returned to Same Program</b>	41%	50	41%	61	45%	76	50%
<b>Graduated</b>	19.1%	24	20%	27	20%	38	25%

2. Cybersecurity is not well understood as a career opportunity for women. Consequently, women are underrepresented in cybersecurity nationally as well as the CCP Program. The program should consider ways to encourage and nurture pathways into cybersecurity for girls, women, and gender minorities to close the gap. Outreach could begin in high school, professional development opportunities, and career fairs. The program should work with marketing and recruitment to develop and implement a plan to present the value and career opportunities to target markets.

Person responsible: Department Head

Timeline: Fall 2022 through Fall 2025

**Assessment**

3. The program should revise its Assessment Plan and establish an assessment cycle to better support closing the loop for continuous improvement. Currently, assessment data has been collected regularly; in AY 2020, all seven Cybersecurity program learning outcomes were assessed using the AEFIS platform. Before implementing AEFIS, assessment data was collated from data in Canvas by faculty members for each course in the program. The program has defined appropriate learning outcomes, selected assessment measures,

assessed the learning outcomes, and collected data. The current assessment process has included scheduled meetings each semester for faculty teaching in the program to monitor progress, review data, and determine appropriate actions based on findings.

However, not all outcomes need to be assessed every year. To optimize analysis, the program should create a schedule for assessing learning outcomes over time by identifying select Learning Outcomes to be measured in a chosen year, with all Learning Outcomes being measured within a five-year period. Then, a collective analysis of the results can be followed by program adjustments to improve learning and reassessed in an appropriate interval to close the loop.

Person responsible: Department Head

Timeline: Fall 2022 through Fall 2027

### **Transfer**

4. After completing the Cybersecurity curriculum, students are well-positioned for transfer. The department should continue to pursue formalizing transfer agreements with local institutions to provide opportunities for CCP students to enroll with full recognition of credits earned.

Person responsible: Department Head

Timeline: Fall 2022 through Fall 2027

### **Workforce**

5. Potential employers are increasingly interested in hiring graduates who have had meaningful real-world cybersecurity experience. An internship, that may be paid or unpaid, would allow students to gain experience in the field by applying concepts, protocols, and tools acquired through coursework to the real world by working alongside cybersecurity experts. The program should explore opportunities to develop relationships within the local community that could provide internship opportunities, value the benefit CCP students could bring, and provide students with invaluable work experience.

Person responsible: Department Head

Timeline: Fall 2022 through Fall 2027



## 1. Narrative

A new industry, cybersecurity, was born when the world went online in 1990. Cybersecurity is the practice of protecting critical systems and sensitive information from digital attacks and combating threats against networked systems and technologies<sup>5</sup>. The need for cybersecurity increased significantly with the growth of connectedness and the digitization of business and personal information. Today the global cybersecurity market is forecast to grow to \$345 billion by 2026<sup>6</sup>.

The first Cybersecurity program at Community College of Philadelphia was established in the Fall 2017 semester, introducing new career opportunities to students and providing important resources to the Philadelphia community. The primary objective of the Cybersecurity program is to teach students how to implement successful solutions to the security needs of businesses through risk compliance, incident handling, network solutions, and application troubleshooting while maintaining moral ethics.

In an environment experiencing continual change and evolution, program faculty must also evolve at a similar pace. The mindset of Cybersecurity faculty is always to be updating their industry skill sets and maintaining currency in the latest cybersecurity certifications to fully engage with students about the latest data breach threats and understand the current landscape.

Cybersecurity computer labs are resourced from vendors that design labs to replicate industry standards, for example, CompTIA, EC Council, and Cisco. These hands-on and faculty-guided labs support program learning outcomes and encourage students to master industry-related projects in preparation for employment in the real-world environment.

In the classroom, faculty members reach out to struggling students to find out what they may need to succeed in the class. To identify potential problems, faculty checks attendance, grade scores, and assignment submissions to see where struggling students are having issues. When struggling students are identified, the program's proactive practice is to connect the student with Dr. Mavis Pogue for tutorial support. Dr. Pogue is an Assistant Professor and full-time faculty member at Community College of Philadelphia. She is available to tutor one-on-one, and her expertise in application software fundamentals and computer technology supports the program's core essentials.

Continued education provides increased opportunities, responsibilities, and salaries. Approximately 10% of recently departing students transferred, 17% enrolled at Temple University, 11% enrolled at Drexel, and 12% enrolled at Pierce. The program has transfer agreements with Chestnut Hill College, Peirce College, Harrisburg University and is currently exploring options with Drexel and Temple University.

Assessment data has been collected regularly; in AY 2020, all seven Cybersecurity program learning outcomes were assessed using AEFIS; before implementing AEFIS, assessment data was collated from data in Canvas by faculty members for each course in the program. The program has defined appropriate learning outcomes, selected assessment measures, assessed the learning outcomes, and collected data. The next step, analyzing the results of the outcomes assessed, is not presented in the evidence. It is important to analyze and report the results of the assessments in a meaningful way. Analyzing the results could then be followed by adjustments to improve

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<sup>5</sup> [IBM Security](#).

<sup>6</sup> [Cyber Magazine](#)

learning and reassessed in an appropriate interval to close the loop. These steps are fundamental to the assessment process; if the results do not lead to adjustments, improvements, or confirmation of prior adjustments, the cycle does not support continuous improvement.

Over the past five years, the program's accomplishments have been significant; the Cybersecurity program brings students critical thinking skills, logical reasoning practice, professional value, and opportunities to succeed in a competitive industry.

**Community College *of* Philadelphia**  
Academic Program Review:  
Network Administration (NTMA), A.A.S.

Authors: Sonny Chang, Chuck Herbert, Dr. Dawn Sinnott  
Spring 2022

## Executive Summary

### Key Findings

#### Enrollment and Demographics

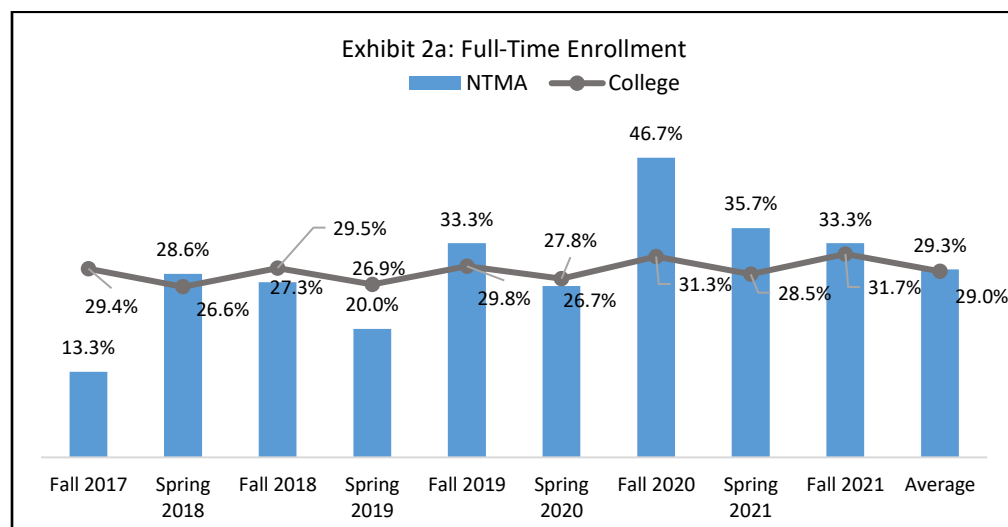
1. Over the period studied, Network Administration enrollments have been relatively stable, with an average of 14 students per semester; see Exhibit 1

Exhibit 1: College and Program Enrollment <sup>1</sup>

	Fall 2017	Spring 2018	Fall 2018	Spring 2019	Fall 2019	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Average
College-Wide	17,296	16,503	16,671	15,544	15,996	14,789	13,673	12,195	11,647	14,924
Network Administration	15	14	11	15	12	15	15	14	12	14

2. Enrollment Demographics

- a. On average, the Network Administration program full-time enrollment is similar to the college-wide average; Network Administration 29.3%, College-wide 29.0%; see Exhibit 2a
- b. On average, the Network Administration program enrolled a higher proportion of career age students 22-29 years of age (58.3%) than the College overall (49.2%); see Exhibit 2b
- c. On average, the Network Administration program distribution of gender within race finds a higher percentage of Asian males (10.7%), Black males (41.8%), and White males (16.4%) than the college-wide distribution of Asian males (4.6%), Black males (13.5%), and White males (8.6%); see Exhibit 2c



<sup>1</sup> Enrollment and Retention Tables reflect students' primary major

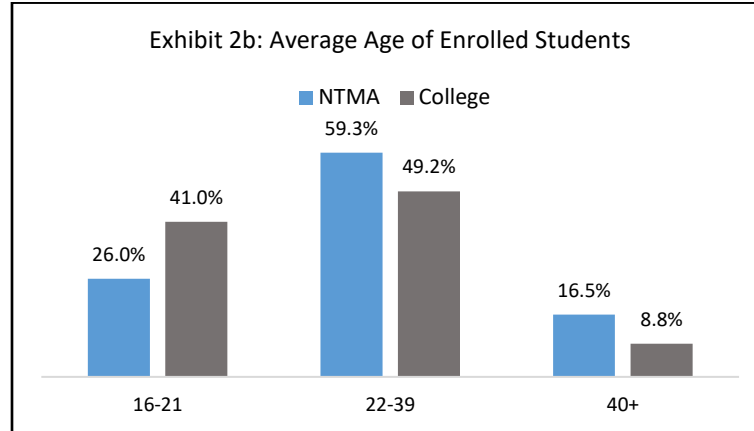


Exhibit 2c: College and Department Enrollment by Gender within Race

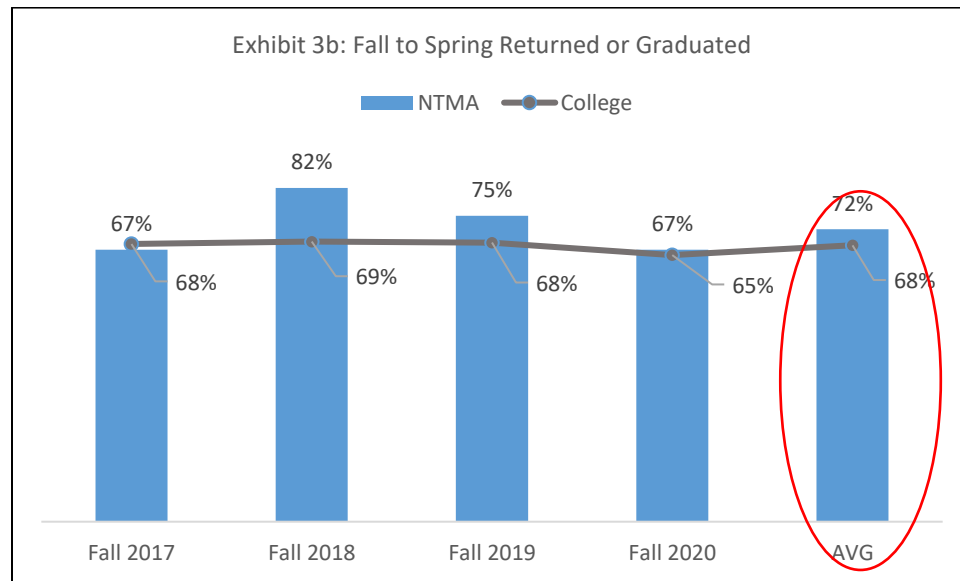
		Fall 2017	Spring 2018	Fall 2018	Spring 2019	Fall 2019	Spring 2020	Fall 2020	Spring 2021	Fall 2021	NTMA Average	College Average
Asian	Female	6.7%	7.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	5.6%
Asian	Male	6.7%	0.0%	0.0%	0.0%	16.7%	20.0%	20.0%	21.4%	9.1%	10.7%	4.6%
Black	Female	20.0%	35.7%	27.3%	20.0%	8.3%	6.7%	6.7%	21.4%	9.1%	17.2%	30.4%
Black	Male	46.7%	35.7%	72.7%	53.3%	25.0%	33.3%	33.3%	28.6%	54.5%	41.8%	13.5%
Hispanic	Female	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.4%
Hispanic	Male	6.7%	7.1%	0.0%	6.7%	8.3%	0.0%	0.0%	0.0%	9.1%	4.1%	4.9%
White	Female	0.0%	0.0%	0.0%	6.7%	8.3%	6.7%	6.7%	7.1%	0.0%	4.1%	14.4%
White	Male	13.3%	14.3%	0.0%	6.7%	25.0%	26.7%	26.7%	14.3%	18.2%	16.4%	8.6%
	Female										23.0%	60.8%
	Male										73.0%	31.6%

**Retention – Returned or Graduated**

3. Fall to Spring Retention between fall 2017 and fall 2020
  - Fall to spring same program retention: The percent of Network Administration program students returning to the same program in the spring is five points higher than college-wide average; Network Administration average 69.8%, college-wide average 64.8%, see Exhibit 3a
  - Fall to spring same program retention or graduation: At 72%, the average proportion of Network Administration program students who returned or graduated from fall to spring averaged four points higher than the College average (68%), See exhibit 3b

Exhibit 3a: Fall to Spring Retention <sup>2</sup>

	Fall 2017	Fall 2018	Fall 2019	Fall 2020	NTMA Average	College Average
Headcount	15	11	12	15	13	15,909
Returned to Same Program	66.7%	81.8%	66.7%	66.7%	69.8%	64.8%
Returned to Different Program	0.0%	0.0%	0.0%	6.7%	1.9%	4.4%
Graduated	0.0%	0.0%	8.3%	0.0%	1.9%	2.9%
Did Not Persist	33.3%	18.2%	25.0%	26.7%	26.4%	27.9%



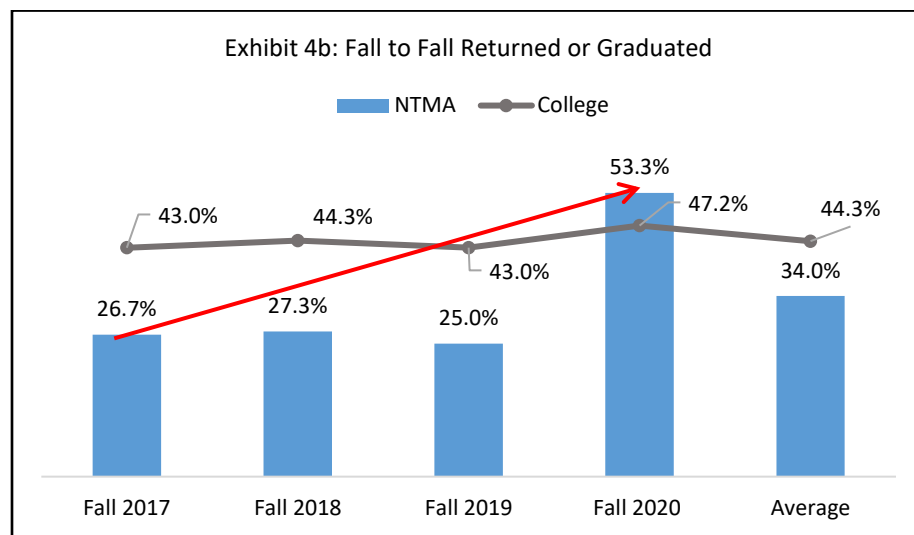
4. Fall to Fall Retention between fall 2017 and fall 2020

- Fall to fall same program retention: The percent of Network Administration program students returning to the same program in the fall is eight points lower than the college-wide average; Network Administration average 26.4%, college-wide average 34.2%, see Exhibit 4a
- Fall to fall same program retention or graduation: The average proportion of Network Administration program students who returned or graduated from fall to fall increased 100% from 26.7% in fall 2017 to 53.3 in fall 2020, see Exhibit 4b

<sup>2</sup> Enrollment and Retention Tables reflect students' primary major

Exhibit 4a: Fall to Fall Retention <sup>3</sup>

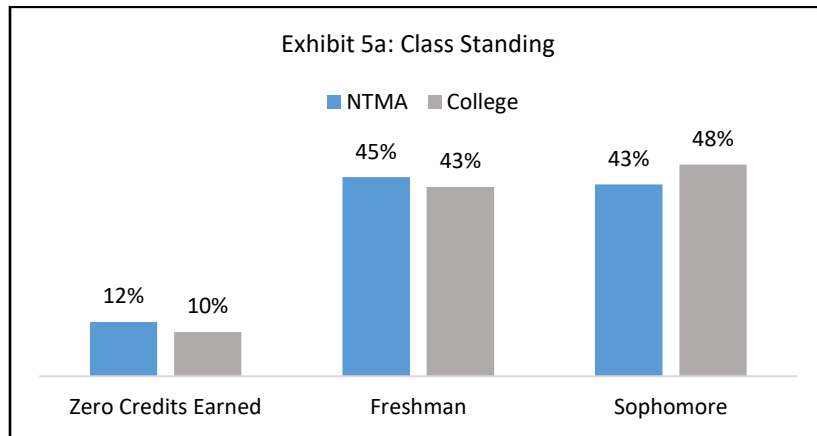
NTMA	Fall 2017	Fall 2018	Fall 2019	Fall 2020	NTMA Average	College Average
Headcount	15	11	12	15	13	15,909
Returned to Same Program	26.7%	27.3%	16.7%	33.3%	26.4%	34.2%
Returned to Different Program	13.3%	0.0%	8.3%	20.0%	11.3%	7.2%
Graduated	0.0%	0.0%	8.3%	20.0%	7.5%	10.1%
Did Not Persist	60.0%	72.7%	66.7%	26.7%	54.7%	48.5%



5. Academic Success and Graduation

- a. Class standing is a measure of students' earned credits. Freshman reflects students with 1-24 cumulative earned credits and sophomore reflects students with more than twenty-four cumulative earned credits. Zero credits reflect students who have either not attempted or not passed any college-level coursework at the start of a given term. On average, between fall 2017 and fall 2021, 43% of Network Administration program students earned more than 24 college-level credits; this is slightly less than the College-wide average of 48%; see Exhibit 5a
- b. Over the period studied, Network Administration students averaged slightly lower academic performance (89.4% in Good Academic Standing) than the College overall (90.7% in Good Academic Standing); see Exhibit 5b
- c. Over the period studied, Network Administration awarded four AAS degrees; see exhibit 5c

<sup>3</sup> Enrollment and Retention Tables reflect students' primary major



	NTMA	College-Wide
Good Standing	89.4%	90.7%
Dropped or Placed on Probation	10.6%	9.3%

	2017	2018	2019	2020	2021	Total
NTMA				1	3	4
AAS Degrees	587	530	558	482	241	2,398



## Workforce Development

### 6. Aggressive Job Posting Demand

Job posting demand is high and appears to exceed resources. There are an average of 13,321 jobs in the Philadelphia area, while the national average for this size is 12,751. The higher than average supply of jobs may make it easier for workers in this field to find employment in the Philadelphia area



Network Administration program aligns with employment in the following occupations

Code	Description
15-1212	Information Security Analysts
15-1245	Database Administrators and Architects
15-1244	Network and Computer Systems Administrators
15-1241	Computer Network Architects
15-1231	Computer Network Support Specialists
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers

- Regional Compensation Is 2% Higher Than National Compensation
- The 2020 median wage in the Philadelphia area is \$85,026, while the national median wage is \$83,102.

Top Companies	Top Job Titles
Robert Half	Network Engineers
Motion Recruitment	Data Engineers
The Judge Group	Systems Administrators
Deloitte	Security Engineers
Wells Fargo	Database Administrators
IBM	Information Security Engineers
Comcast	Salesforce Administrators
SAP	
Randstad	
Accenture	

**Assessment**

7. Evidence of formal assessment of student learning in Network Administration's required or "core" courses supporting the stated program learning outcomes (PLOs) has not been provided.

There is evidence of meaningful adhoc and qualitative assessment, such as: identifying and resolving scheduling issues that were diminishing retention and graduation options for students; the active department teaching circles where faculty meet to discuss what needs to be done for the future of the curriculum; engaging at-risk students with instructor support and recommendations for tutoring; even maintaining currency of program curriculum to meet evolving industry standards. However, work needs to be done to develop an assessment plan detailing how the department will conduct and implement a sustainable assessment process.

B. Prior Audit

The Network Technology Management and Administration Program was designed to meet Microsoft industry certification standards. In 2019-2020, Microsoft dramatically changed the industry certification standards requiring immediate program revisions. To maintain professional practices, it became necessary to update the core requirements to meet the current Microsoft standards. Under the leadership of the Department Chair, Program revisions were recommended, Dr. Hirsch and Dr. Carter approved the redesigned curriculum effective fall 2021, which included a program name change to reflect the thorough redesign.

C. Action Items

The Office of Assessment and Evaluation makes the following recommendations.

**Enrollment and Demographics**

Increase Enrollment as follows:

	Fall 2020	Fall 2023 Increase in Headcount	Fall 2024 Increase in Headcount	Fall 2025 Increase in Headcount
Headcount	15	17 12%	20 15%	23 15%
Returned to Same Program	33%	7 40%	9 45%	12 50%
Graduated	20%	3 20%	4 20%	5 20%

**Program Growth**

1. Almost all major technologies are dependent on networking and connectivity; as these technologies advance, so does the networking career field. The Network Administration program provides career opportunities that are high-paying, professional, and evolving. A priority should be to develop strategies to reach a variety of prospective students such as high schools students, displaced workers, and individuals looking for career advancement. The department should work with college advisors, counselors, recruiting, and the marketing department to educate them about the program opportunities and career field to optimize efforts and establish a sustainable flow of new students.

Person responsible: Department Head

Timeline: Fall 2022 through Fall 2027

2. Computer network administration and technology is not well understood as a career opportunity for women. Consequently, women are underrepresented in the field nationally as well as in the CCP Network Administration Program. The program should consider ways to encourage and nurture pathways into the technology industry for girls, women, and gender minorities to close the gap. Outreach could begin in high school, professional development opportunities, and career fairs. The program should work with marketing and recruitment to develop and implement a plan to present the value and career opportunities to target markets.

Person responsible: Department Head

Timeline: Fall 2022 through Fall 2025

### **Retention**

3. On average, only 27% of the enrolled students return the following fall semester. The department identified scheduling issues as a primary problem, and with the approval of Dr. Hirsch and Dr. Carter, these issues were corrected with major program revisions. The Network Technology Management and Administration program was revised, becoming the Network Administration program, essentially a new program beginning fall 2021. Tracking retention should now be a priority to determine if the scheduling issues have been fully resolved or if other problems also contribute to poor retention.

Person responsible: Department Head

Timeline: Fall 2022 through Fall 2027

### **Assessment**

4. The program has provided strong evidence of meaningful qualitative assessment, such as: identifying and resolving scheduling issues that were diminishing retention and graduation options for students; active department teaching circles where faculty meet to discuss what needs to be done for the future of the curriculum; engaging at-risk students with instructor support and recommendations for tutoring; maintaining currency of program curriculum to meet evolving industry standards. However, work needs to be done to formalize a systematic assessment process in a formal Assessment Plan. An assessment plan will detail a multi-year schedule to evaluate one or two Program Learning Outcomes per year, breaking assessment into small manageable pieces and helping ensure that it is a routine part of departmental practices. The Department's assessment plan will determine the assessment cycle; it describes how the assessment process will be conducted, where and when data will be collected, how it will be evaluated, how it will be shared, and specific follow-through. The first assessment cycle should be ready for implementation and data collection in fall 2022.

Person responsible: Department Head

Timeline: Fall 2022

## Narrative

Companies and organizations using more than one computer to carry out necessary functions employ network administrators. Network administrators ensure computer software and operating systems work properly and stay updated. These professionals oversee the information technology within an organization, serving as the go-to people for computer and technical issues. Network administrators may hold specialized certifications or bachelor or graduate degrees. Professionals in this field earn a generous median annual salary of \$82,050. The U.S. Bureau of Labor Statistics (BLS) projects this field will experience a steady 5% job growth rate in the coming years.<sup>4</sup>

The Network Administration program at CCP provides a gateway to entry-level employment as network and computer systems administrators responsible for the day-to-day operation of computer networks. They organize, install, and support an organization's computer systems, including local area networks (LANs), wide area networks (WANs), network segments, intranets, and other data communication systems. This program offers a core of general education and computer information systems courses coupled with a flexible set of elective requirements. Students who complete the program will enter the job market as desktop support specialists, IT technicians, and IT support staff, with a solid foundation in the computing technology found in today's workplace.

These career opportunities in technology motivate students, but observations and analysis indicated that students were not completing the program as expected. Department Head Chuck Herbert initiated a comprehensive analysis finding that several program courses relied on prerequisites that would often get canceled and may or may not run during the semester. This interruption was causing scheduling issues for students and creating unsurmountable delays in completion and graduation. Chuck Herbert identified the necessary changes providing a course sequence that would better facilitate student completion and graduation. Program revisions were recommended, Dr. Hirsch and Dr. Carter approved the redesigned curriculum effective fall 2021, which included a program name change to reflect the thorough redesign.

Students can also complete the Network and Systems Administration Proficiency Certificate (NSPC) as part of their AAS degree program. Courses are closely linked to professional certification from CompTIA, Microsoft, and Cisco to support students in developing technical skills needed to maintain computer networks and the analytical skills necessary to analyze and manage computer networks.

The networking curriculum is divided about 50/50 into lecture and hands-on lab components. A program strength is the hands-on laboratories. The lab curriculum and apparatus are industry-tested, supported by academic partner CompTIA and Cisco, providing valuable experience and accelerating student learning. The program covers every aspect of IT training using various methods to engage our students.

Informal assessment has been a consistent part of the program, from identifying completion issues to the active department teaching circles where faculty meet to discuss what needs to be done for the future of the curriculum. As recommended in the previous Action Items section, it is now time for the department to formalize the Program Learning Outcomes (PLO) assessment process with an assessment plan and full utilization of AEFIS, the College assessment standard.

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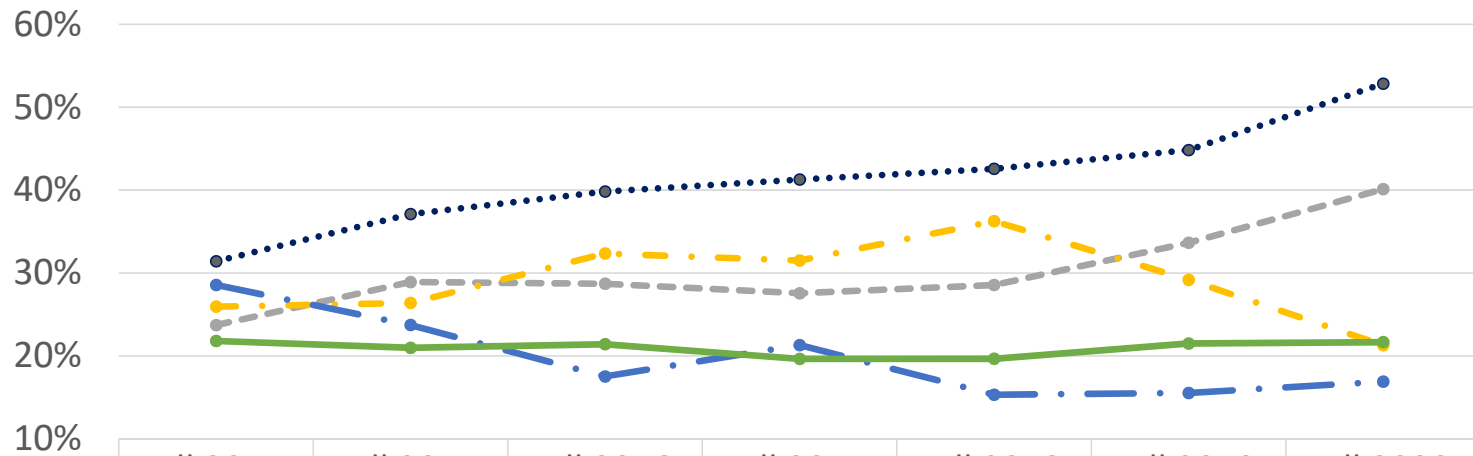
<sup>4</sup> [Computer Science.org](https://www.computer-science.org/)

In recent qualitative survey research sent to graduates earning a networking degree and or certificate, students had the following to say their experiences

How valuable is your CCP degree in the job market
Coursework at CCP greatly helped me get my A+ Certification. The networking cert. from CCP made it possible for me to get my job. From there, I believe my job experience over the past three years will take me to the next step.
I went to Peirce college after CCP. However, the quality of education I received from CCP was better than the education I received for Peirce.
I don't think all the textbooks should be written by a single person, especially when way better books (peer-reviewed) have been written by more qualified individuals and cost less for the students. During my time at CCP, I was already well into studying for the CCNA, which I earned about four months ago. TBH, I learned a lot more from my self-study and the topics in much greater depth than the classes at CCP were taught. However, I enjoyed a lot of the class meetings and the interesting conversations and people. It's also nice to see where you stack up against your competition in the job market. Also, an introductory course on Python for networking should be added to the curricula since it's essential for anyone who ever wants to call themselves a network "engineer" these days.
I love CCP
Thank you CCP for everything!
What were your most valuable experiences at CCP?
Work-Study
The teamwork/group exercises, the hands-on experience, especially taking the computer apart and putting back together and earning what each component does. So valuable.
Labs where I was able to actually touch and do the work.
The class meetings, passionate instructors, and eager learners.
CCP is a good school
Meeting new people, using the different facilities, and learning materials that were relevant to my field of study
Connecting with professors and students!

# AACC Pathways Project / CCRC Data

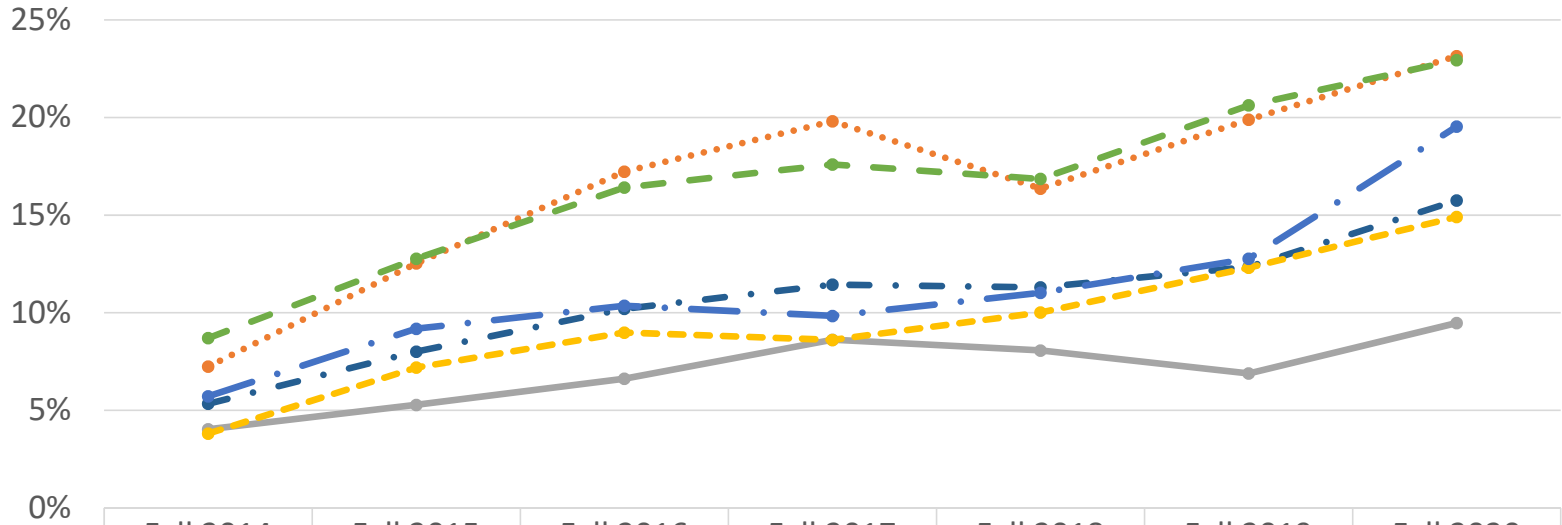
## Student Demographics



	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
College-ready	23.7%	28.9%	28.7%	27.6%	28.5%	33.6%	40.1%
DevEd: 1 subject	26.0%	26.4%	32.4%	31.5%	36.3%	29.2%	21.3%
DevEd: 2 subjects	28.6%	23.7%	17.5%	21.3%	15.3%	15.5%	16.9%
DevEd: 3 subjects	21.8%	21.0%	21.4%	19.6%	19.7%	21.5%	21.7%
Full-time	31.4%	37.1%	39.8%	41.3%	42.6%	44.8%	52.8%

# AACC Pathways Project / CCRC Data

## Earned 12+ College Credits in 1st Term

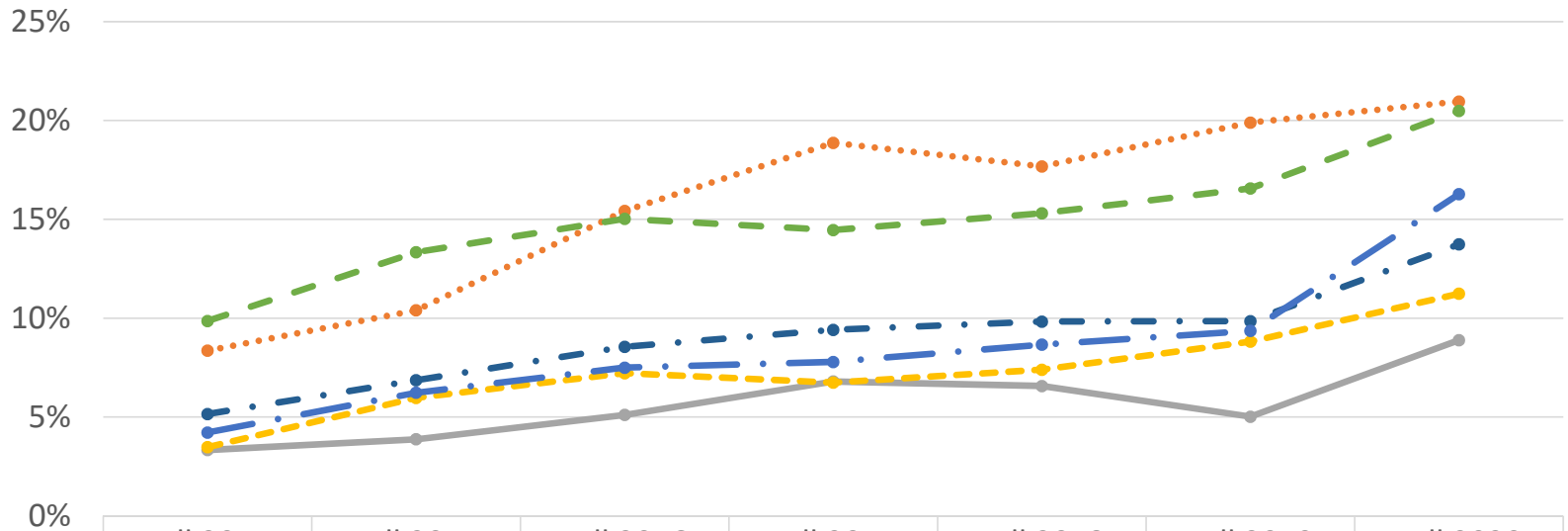


	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
● TOTAL	5.3%	8.0%	10.2%	11.4%	11.3%	12.4%	15.8%
● Asian	7.2%	12.5%	17.2%	19.8%	16.4%	19.9%	23.1%
● Black	4.0%	5.3%	6.6%	8.6%	8.1%	6.9%	9.5%
● Hispanic	3.8%	7.2%	9.0%	8.6%	10.0%	12.3%	14.9%
● Other / Unknown	5.7%	9.2%	10.4%	9.8%	11.0%	12.8%	19.5%
● White	8.7%	12.8%	16.4%	17.6%	16.9%	20.6%	22.9%



# AACC Pathways Project / CCRC Data

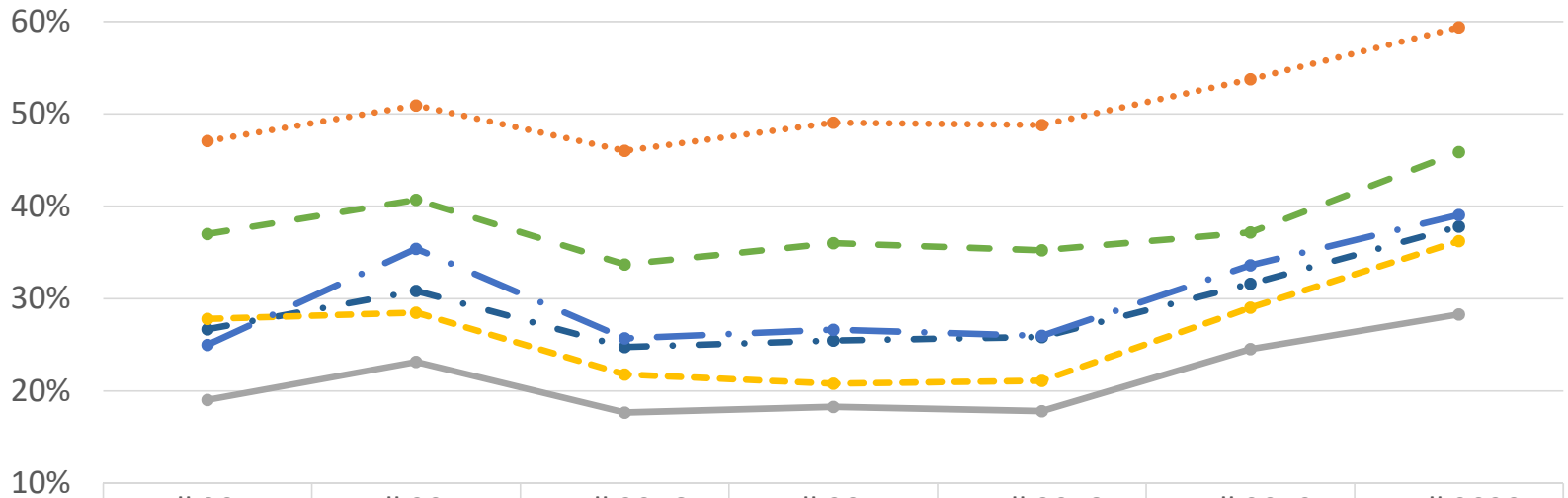
## Earned 24+ College Credits in Year 1



	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
● TOTAL	5.2%	6.9%	8.6%	9.4%	9.8%	9.9%	13.7%
● Asian	8.4%	10.4%	15.4%	18.9%	17.7%	19.9%	21.0%
● Black	3.3%	3.9%	5.1%	6.8%	6.6%	5.0%	8.9%
● Hispanic	3.5%	6.0%	7.2%	6.7%	7.4%	8.8%	11.2%
● Other / Unknown	4.2%	6.2%	7.5%	7.8%	8.7%	9.4%	16.3%
● White	9.9%	13.3%	15.0%	14.5%	15.3%	16.6%	20.5%

# AACC Pathways Project / CCRC Data

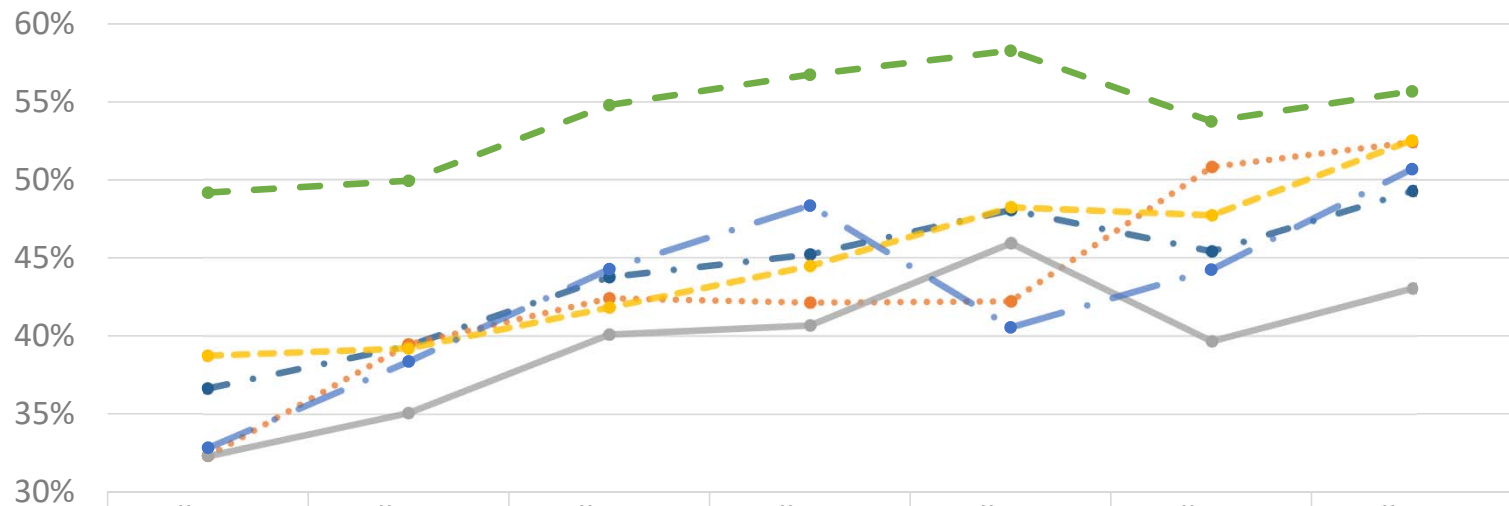
## Completed College Math in Year 1



	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
TOTAL	26.7%	30.8%	24.8%	25.5%	25.9%	31.6%	37.8%
Asian	47.1%	50.9%	46.0%	49.1%	48.8%	53.8%	59.4%
Black	19.0%	23.2%	17.7%	18.3%	17.8%	24.5%	28.3%
Hispanic	27.8%	28.5%	21.8%	20.8%	21.1%	29.0%	36.2%
Other / Unknown	25.0%	35.4%	25.7%	26.6%	26.0%	33.6%	39.1%
White	37.0%	40.7%	33.7%	36.0%	35.3%	37.2%	45.9%

# AACC Pathways Project / CCRC Data

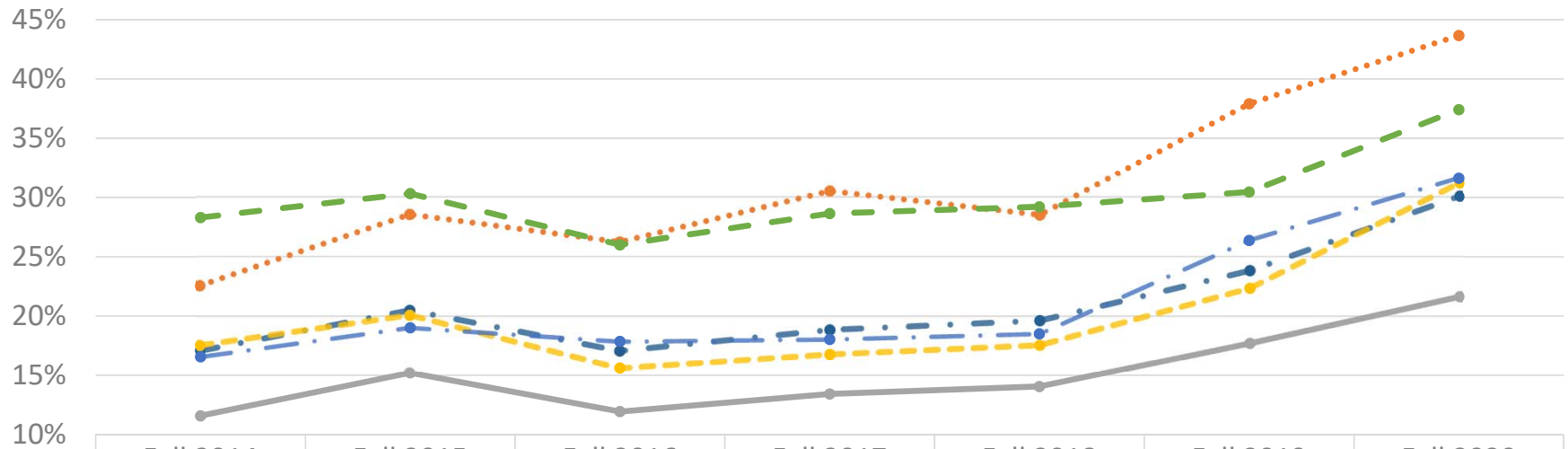
## Completed College English in year 1



	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
● TOTAL	36.7%	39.4%	43.8%	45.2%	48.1%	45.4%	49.3%
● Asian	32.3%	39.5%	42.4%	42.1%	42.2%	50.8%	52.4%
● Black	32.3%	35.1%	40.1%	40.7%	45.9%	39.7%	43.0%
● Hispanic	38.7%	39.2%	41.8%	44.5%	48.2%	47.7%	52.5%
● Other / Unknown	32.8%	38.4%	44.3%	48.4%	40.6%	44.3%	50.7%
● White	49.2%	49.9%	54.8%	56.8%	58.3%	53.8%	55.7%

# AACC Pathways Project / CCRC Data

## Completed Both College Math and English in Year 1



	Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
● TOTAL	17.1%	20.5%	17.1%	18.8%	19.6%	23.8%	30.1%
● AS	22.6%	28.5%	26.2%	30.5%	28.5%	37.9%	43.7%
● BL	11.6%	15.2%	11.9%	13.4%	14.1%	17.7%	21.6%
● HI	17.5%	20.1%	15.6%	16.8%	17.6%	22.3%	31.2%
● OR	16.6%	19.0%	17.9%	18.0%	18.5%	26.4%	31.6%
● WH	28.3%	30.3%	26.0%	28.6%	29.2%	30.5%	37.4%

**Board of Trustees, Student Outcomes Committee – 4/7/2022**  
**Division of Strategic Initiatives & Community Engagement: Catto Scholarship**  
**RE: Outcomes - Fall 2021**  
**Submitted by April D. Voltz, Executive Director**

**Overview**

***Mission:** The Octavius Catto Scholarship is an anti-poverty initiative designed to put more Philadelphians on the path to success at Community College of Philadelphia. The Scholarship aims to make the transformative power of education available to students by providing funding and additional supports.*

***Eligibility:** First time-full time students, Philadelphia residents with a high school diploma, and EFC (Expected Family Contribution) up to \$8000. For Fall 2022, eligibility will expand to include transfers and CCP returning students after a stop-out of one year or more.*

**Catto Scholarship Topline Outcomes**

- a. Retention rate to increase 15 percentage points over current level from one term to another
  - Baselines - FA2016, SP2016
- b. Three-year completion (Graduation) rate increase to 25% by 2025: Baseline - FA2016, 15%
- c. Apply an equity lens with the goal of closing the gap so that all population groups are achieving at a high level

**A. Catto Scholarship Enrollment by Cohort**

**1. Cohort 1 - Spring 2021: 133**

**2. Cohort 2 - Fall 2021: 348**

Fall 2021 cohort	Black Non-Hispanic	Hispanic	Multi-Racial	White Non-Hispanic	Unknown	Asian	Total	%	Age Range		%
F	94	57	5	37	6	18	217	62.36%	19 or Less	280	80%
M	54	27	1	20	0	26	128	36.78%	20 - 22	48	14%
N/A	1			1		1	3	0.75%	23 - 25	7	2%
	149	84	6	58	6	45	348		26 - 30	4	1%
								100%	31 - 40	5	1%
									40 - 50	1	0%
									N/A	3	1%
	43%	24%	2%	17%	2%	13%		100%		348	100%

**B. FA21 Cohort Placement (348) & Progress:** Catto Scholars exceeded comparison group (non-Catto FTFT) pass rates for both Developmental English and Developmental Math.

- a. English Placement: College Ready – 331 (95%), Developmental – 17 (5%)
- b. Math Placement: College Ready – 286 (82%), Developmental – 62 (18%)

Developmental Ed. Course Progress	Catto Scholars Pass Rates	Non-Catto Pass Rates
Level II (098/099): Writing & Reading	60%(n=15)/ 64%(n=14)	52%(n=116)/49%(n=114)
Level IV (098/101): College level English with Writing Support	60%(n=103)/65%(n=277);	58%(n=166)/63%(n=351)
FNMT 019: Introductory Math	60%(n=5)	24%(n=148)
FNMT 017: Elementary Algebra	51%(n=53)	37%(n=98)

C. **Academic Progress: All Scholars (n=479):**

1. **Catto “High Flyers”**

- Honors with Distinction: Earned 4.0 GPA - 36 Scholars (8%)
- Earned Honors (3.2 GPA – 3.99 GPA): 103 Scholars (22%)
- Rising Stars (2.50 GPA - 3.19 GPA): 96 Scholars (20%)
- Good Academic Standing: 303 (Avg. 3.0 GPA) (63%)
- Four (4) Catto Scholars have already earned 40 – 54 credits (Gateway to College/dual enrollment students)
- Saxby's Inaugural Student CEO program (SCEO) @ CCP: Catto Scholar
- One (1) December 2021 graduate: Transferred to Temple University for SP22

2. **End of FA21 Academic Standing Review by Cohort**

a. **Cohort 1 - SP21 (133): 95 retained to FA21**

- Good Standing, 77
- Probation, 56
  - Full-time, 41
  - Part-time, 12
  - Dropped for loss of eligibility, 3

b. **Cohort 2 - FA21 (348)**

- Good Standing, 236
- Probation Full-time, 110
- No Standing, 2 (withdrew from all classes prior to the end of the semester)

3. **Catto Scholarship Continued Support: End of Year Review- Cohort 1 - SP21**

- a. SP21- FA21: 133 Scholars to 95 Scholars (71% retention)
- b. Approved for continued support: 84/133 (63%)
- c. Not approved for continued support: 49/133 (37%)
  - 23 of the 49 did not enroll during FA21
  - 49 Scholars were not approved to continue due to loss of eligibility
    - Insufficient Cumulative GPA (1), Insufficient Credit Accumulation (47), Both (1)

D. **Retention: Catto cohorts’ persistence rate from FA21 to SP22 were close to/or exceeded established targets**

**Catto SP21 Cohort 1& Non-Catto SP21 (FTFT, Philly Res, <=8kEFC) enrolled Spring 2022**

SP21 cohorts	Cohort total	Retained to Term 2 – FA21	Retained to Term %	Retained to Term 3 – SP22	Retained to Term %
<b>Catto Targets</b>			71%		55%
<b>Catto</b>	133	95	71%	68	51%
<b>Non-Catto comparison group</b>	161	108	67%	83	52%

**Catto FA21 Cohort 2 & Non-Catto FA21 (FTFT, Philly Res, <=8kEFC) enrolled Spring 2022**

FA21 cohorts	Cohort total	Retained to Term 2 – SP22	Retained to Term %
<b>Catto Targets</b>			76%
<b>Catto</b>	348	301	86%
<b>Non-Catto comparison group</b>	574	456	79%

Overall, Fall semester was a success with student enrollment and engagement. We will continue to provide quality wraparound support along with proactive and assertive outreach to our Scholars in support of student persistence and success.

**Student Outcomes Committee Agenda Calendar**  
**Monthly Topics\***  
**2022**  
**Updated 3/30/22**

<b>SOC Meeting</b>	<b>Topics Scheduled to be Addressed</b>
January 2022	<ul style="list-style-type: none"> <li>• Medical Laboratory Technician Academic Program Review</li> <li>• Faculty Professional Learning Update</li> </ul>
February 2022	<ul style="list-style-type: none"> <li>• Chemistry Academic Program Review</li> <li>• Pre-College STEM Initiatives</li> <li>• Review of SOC Agenda Calendar</li> </ul>
March 2022 Committee of the Whole	<ul style="list-style-type: none"> <li>• Enrollment Update and Trends</li> <li>• CATC – The Student Experience Overview</li> <li>• Proposed Health &amp; Life Science Building</li> </ul>
April 2022	<ul style="list-style-type: none"> <li>• Catto Scholarship Update</li> <li>• CCRC KPI Data for Guided Pathways</li> <li>• Cybersecurity Academic Program Review</li> <li>• Network Administration Academic Program Review</li> </ul>
May 2022	<ul style="list-style-type: none"> <li>• Faculty Promotion Approval</li> <li>• Nursing Academic Program Review</li> <li>• Dual Enrollment Update</li> <li>• Diversity Fellowship Update</li> </ul>
June 2022	<ul style="list-style-type: none"> <li>• Education: Early Childhood (Birth to 4th Grade) Academic Program Review</li> <li>• Diversity Certificate Programs</li> <li>• Year in Review</li> </ul>
September 2022	<ul style="list-style-type: none"> <li>• Automotive Technology Academic Program Review</li> <li>• Culinary Arts Program Mid-Term Review Progress Update</li> </ul>
October 2022 Committee of the Whole	<ul style="list-style-type: none"> <li>• Catto Scholarship Update</li> <li>• Enrollment Update</li> <li>• Center for Male Engagement/I Am More Update</li> </ul>
November 2022	<ul style="list-style-type: none"> <li>• Communication Studies Academic Program Review</li> <li>• Dental Hygiene Academic Program Review</li> <li>• Faculty Professional Development Update</li> <li>• Liberal Arts: Honors Academic Program Review One-Year Update</li> <li>• Behavioral Health/Human Services Academic Program Review One-Year Update</li> </ul>

\*Additional program and certificate reviews, and discussion topics may be added as needed. 1.27.22

# ACADEMIC PATHWAYS 2021-2022

Community College of Philadelphia offers degree programs that, upon successful completion, will earn you an associate degree and the possibility of transferring to a four-year college or help you get started on the path to a new career in an in-demand field. The College also offers academic and proficiency certificate programs designed to be the path to a new career or an associate degree.

## HEALTH CARE

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### Degree Programs

- Dental Hygiene\*
- Diagnostic Medical Imaging\*
- Health Care Studies
- Health Services Management\*
- Medical Laboratory Technician\*  
Nursing\*
- Public Health
- Respiratory Care Technology\*

### Proficiency Certificate Programs

- Medical Assistant
- Medical Insurance Billing
- Ophthalmic Assistant
- Patient Service Representative
- Personal Training

- **New Programs, Fall 2021**

\* **Select program; please refer to the All Offerings page on the College website for additional information.**

Revisions may be made to the College's program offerings.

Please refer to the College Catalog at [www.ccp.edu/college-catalog](http://www.ccp.edu/college-catalog) for the most up-to-date list of programs.

## SCIENCE AND TECHNOLOGY

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### Degree Programs

- Applied Engineering Technology
- Biological Sciences
- Biology\*
- Biomedical Equipment Technology
- Chemistry\*
- Computer Information Systems – IT
- Computer Science\*
- Cybersecurity
- Engineering Science\*
- Mathematics\*
- Network Administration

### Proficiency Certificate Programs

- Biomedical Equipment Technology I and II
- Computer Programming I – Application, Web and Database Development
- Computer Programming II – Algorithms and Computation
- Cybersecurity I and II
- Data Science
- Mobile Application Development
- Network and Systems Administration
- Web Development I
- Web Development II – Cloud Computing\*

## DESIGN, CONSTRUCTION AND TRANSPORTATION

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### Degree Programs

- Architecture
- Automotive Technology
- Construction Management
- Facilities Management
- Interior Design

### Proficiency Certificate Programs

- Advanced Automotive Repair Professional\*
- Architectural Visualization
- Automotive Service I
- Automotive Service II\*

Community  
College  
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[www.ccp.edu](http://www.ccp.edu)

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# ACADEMIC PATHWAYS 2021-2022

## BUSINESS, ENTREPRENEURSHIP AND LAW

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### Degree Programs

Accounting  
Business - Accelerated\*  
Business - General  
Business Leadership  
Criminal Justice  
Culinary Arts  
Fashion Merchandising and Marketing  
Fire Science  
Individualized Studies\*  
Paralegal Studies\*  
Tourism and Hospitality Management

### Proficiency Certificate Programs

Accounting Paraprofessional  
Business Leadership  
Corporate Social Responsibility  
Culinary Arts I  
Culinary Arts II\*  
Digital Investigations  
Electronic Discovery  
Entrepreneurship and Small Business  
Management  
Fashion Retail Sales and Customer Service  
Fire Science and Public Safety  
Geographic Information Systems  
Paralegal Studies\*  
Post-Baccalaureate Accounting\*  
• Project Management  
Tourism and Hospitality Management

## CREATIVE ARTS

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### Degree Programs

Art and Design  
Digital Video Production  
Music Performance\*  
Photographic Imaging  
Sound Recording and Music Technology  
Theater

### Proficiency Certificate Programs

Acting  
Digital Imaging  
Digital Video Production  
Music Production  
Piano Technician\*  
Technical Theater

## LIBERAL ARTS AND COMMUNICATIONS

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### Degree Programs

American Sign Language/  
English Interpreting\*  
Black Studies  
Communication Studies  
English  
International Studies  
Liberal Arts  
Liberal Arts - Honors\*  
Mass Media

### Academic Certificate Program

Creative Writing

### Proficiency Certificate Programs

American Sign Language/English  
Interpreting I\* and II\* Post-Baccalaureate  
• Religious Studies

## EDUCATION AND HUMAN SERVICES

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### Degree Programs

Behavioral Health/Human Services  
Education – Early Childhood  
• Education – Middle and Secondary Level  
Liberal Arts – Social/Behavioral Science  
Psychology

### Academic Certificate Programs

Human Services  
Recovery and Transformation

### Proficiency Certificate Programs

Early Childhood Education  
Recovery Leadership

### • New Programs, Fall 2021

\* **Select program; please refer to the *All Offerings* page on the College website for additional information.**

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