

LAKE TAHOE COMMUNITY COLLEGE COMPUTER SCIENCE ADVISORY COMMITTEE MEETING

WEDNESDAY FEBRUARY 10, 2021 (<https://cccconfer.zoom.us/j/96394586153>)



- Welcome and Introductions
- Annual Program Review & Updates (2019-20)
- Feedback from Industry Partners
- Perkins Funding



Health and Public Safety

Serve • Care • Protect

Support physical and mental health to help people and communities thrive. Learn how to work effectively in a team that saves lives during emergency situations. Get employed in counseling, emergency medicine, law enforcement, medical administration, or firefighting.

- Addiction Studies – Associate Degree/Certificate of Achievement
- **Computer & Information Sciences – Associate Degree/Certificate of Achievement/Employable Skills Certificate**
- Criminal Justice – Associate Degree/Associate Degree for Transfer/Certificate of Achievement
- Dental Associate – Employable Skills Certificate
- Emergency Medical Technician (EMT) – Employable Skills Certificate
- Fire Science – Associate Degrees/Certificates of Achievements
- Kinesiology – Associate Degree for Transfer/Employable Skills Certificate
- Medical Office Assistant: Administrative – Associate Degree/Certification of Achievement/Employable Skills Certificates
- Phlebotomy Training Program – Employable Skills Certificate
- Physical Therapy Aide – Employable Skills Certificate
- Wilderness Education – Employable Skills Certificates



Science, Technology, and Environment

Explore • Discover • Analyze

Understand the physical world by using the scientific methods of observation, experimentation, and analysis. Deepen your knowledge of the natural world and gain hands-on experience with advanced scientific tools. Ideal for careers in computer science, environmental engineering, medicine, or GIS mapping.

- **Computer Information Sciences – Associate Degree/Certificate of Achievement/Employable Skills Certificate**
- Environmental Science & Studies – Associate Degrees /Certificate of Achievement/Employable Skills Certificates
- Geographic Information Systems (GIS)– Employable Skills Certificate
- Geography – Associate Degree for Transfer
- Liberal Arts – Associate Degrees/Certificates of Achievements
- Mathematics – Associate Degree for Transfer
- Natural Sciences – Associate Degree/Certification of Achievement

COMPUTER SCIENCE PROGRAMS

Computer Science Employable Skills Certificates/Courses

Overview: **The Computer Programming Employable Skills Certificate** allows students to pursue multiple Oracle Program certifications. Specifically, completion of this short-term program of study prepares students for examinations leading to Oracle certification in:

•Associate, Java SE 7 Programmer •Professional, Java SE 7 Programmer.

Catalog: 2020-21

All courses from the following (12 units):

CIS 120A Computer Programming I (4)

CIS 120B Computer Programming II (4)

CIS 120C Computer Programming III (4)

Overview: **Information Technology (IT) Technician – Cybersecurity Certificate of Achievement** will prepare students for entry- to mid-level positions in desktop support, system administration, computer application installation, information security/cybersecurity, and technically oriented administrative roles. Courses also help prepare students for industry-recognized certification exams from CompTIA and Microsoft. The curriculum provides hands-on experience working with networking concepts, operating system configuration, and information security/cybersecurity practices.

Program Learning Outcomes:

- Design and produce business information systems solutions incorporating current Information Technology, trends, security, and best practices.
- Troubleshoot computer hardware and software issues.
- Configure networks and maintain network infrastructure in an organizational environment.
- Analyze common threats to and vulnerabilities of computer systems and networks.
- Analyze and implement security concepts and security policies.
- Implement network perimeter defense.
- Conduct threat and vulnerability assessments in order to respond to and manage risks.

A. REQUIRED COURSES

27 units distributed as follows:

All courses from the following (27 units):

CIS 104 Information and Communications Technology Essentials – CompTIA A+ (4.5)

CIS 105 Network Fundamentals – CompTIA Network+ (4.5)

CIS 106 Microsoft Client OS Administration (4.5)

CIS 107 Microsoft Server OS Administration (4.5)

CIS 108 Introduction to Information Security Systems – CompTIA Security+ (4.5)

BOT 122 Project Management Concepts and Software (4.5)



Computer Information Systems Advisory Committee Meeting Minutes

Wednesday February 10, 2021

- **Meeting called to order at 3:06pm**

- Present:

- Braun, Regina – Counselor, Lake Tahoe Community College
 - Brown, Cornelius – ICT-DM Deputy Sector Navigator California Community Colleges
 - Deeds, Brad – Dean of Workforce Development and Instruction, Lake Tahoe Community College
 - Goligoski, Amber – Apprenticeship and Work-Based Learning Coordinator, Lake Tahoe Community College
 - Prinzing, Malena – BOT Adjunct Faculty, Lake Tahoe Community College
 - Richardson, Steve – CIS/Math Adjunct Faculty, Lake Tahoe Community College
 - Sears, Tony – Board Trustee, Lake Tahoe Community College
 - Thomas, Treva – Distance Education Coordinator, Lake Tahoe Community College

- **Welcome and Introductions**

- **Annual Program Review & Updates**

- **Brad Deeds:** Just wrapped \$500,000 CTE Online Pathways Grant. Supported IT Technician Pathway/Cybersecurity through instructional design to create canvas courses, and marketing dollars towards recruiting students. College committed to offering two IT courses per academic quarter.
 - **Steven Richardson:** Took over the Computer Programming sequence CIS-120A/B/C a year ago. Class is going well. Students are writing some magnificent programs.
 - **Brad Deeds:** Seen good student enrollments in the year-long Programming sequence, transfers to the CSU system. Prepares students for examinations leading to Oracle certification in Associate, Java SE 7 Programmer and Professional, Java SE 7 Programmer. The IT technician/Cybersecurity certificate is 27 units over six courses. Students can finish in 9 months, get a job or promotion. Almost zero unemployment in cybersecurity. Students prepare for industry valued certifications in CompTIA A+, Network+, and Security+.
 - **Treva Thomas:** The Business Management Worker (BMW) we were working on was going to fall under our Business Office Technology (BOT) Department and then the different level of certifications would be the BMW. Were stacking employability skills so students can work their way up. Probably time for Brad and I to talk about this again because of so many people now working from home, starting their own business etc.
 - **Cornelius Brown:** Working on curriculum related to remote working.
 - **Brad Deeds:** At the same time that we were developing the BMW, we were working on the IT Technician Cybersecurity Program. Classes are 100% online. Admittedly struggled with student enrollments, until recently. With more aggressive marketing tactics, classes are running now with decent numbers. Previously reached out to Marcus Geisler, in the position that Cornelius is now, and asked about some other BMW programs across North Far North. Was kind of a mixed bag, some programs shelved. In the last couple years college has struggled to have consistent instructional staff, has contributed to flat numbers.

- **Feedback from Industry Partners**

- **Steven Richardson:** The A+ certification course last quarter, online, was honestly a brutal course. Net Labs is an online computer lab provider. It provides access to virtual machines which is good because students can go in and completely trash a virtual machine and there's no real-world casualties. They provide also the version that I use, Net Web 3.0. It provided lots of different kinds of operating systems, including windows

MAC OS and Unix or Linux, so students are able to get on machines different flavors and administrator away. Think would be way better if we could have hands-on computer labs.

- **Brad Deeds:** Discussed next steps. When we originally set up the IT-Cybersecurity program, brought in Annette Nylander, faculty from Sierra College who designed the course outlines of record, certificate and degree program. Now that it's about five years old, do we need to change any of those six courses or do we need to add/modify any of them? The IT/Cybersecurity certificate is going to evolve and want to make sure we're evolving with it.
- **Cornelius Brown:** Curious to know if faculty have the tools needed to have a meaningful experience online with their students.
- **Malena Prinzing:** Students at Sierra college are getting a loaner computer/Chromebook sometimes there's a mismatch on what's required of the course and what software they have. Great thing about Net Labs is the virtual machines, works for Microsoft projects, with any students who have Macbooks or Chromebooks.
- **Treva Thomas:** Seconds that. Net Labs is a game changer. Super important to have virtual machines and virtual platforms and the operating systems.
- **Brad Deeds:** In addition to these two certificate programs and degree programs, LTCC has a short sequence that was designed by science faculty Dr Scott Valentine in Geographic Information System (GIS), a sequence aimed at industry professionals, beginning, intermediate & advanced. Have had 20 plus individuals at most classes. Offering for-credit and non-credit via mirrored classes.
- **Perkins**
 - Perkins funding helps the Career & Technical Education department provide a Quarterly Textbook Lending Program, which provides textbooks for eligible students who are pursuing a CTE degree or certificate.
- **Adjournment**
 - The meeting adjourned at 4:14 p.m.

Respectively submitted,
Melissa Liggett
Career & Technical Education Technician

2019-20 ANNUAL PROGRAM REVIEW

Computer Programming Employable Skills Cert

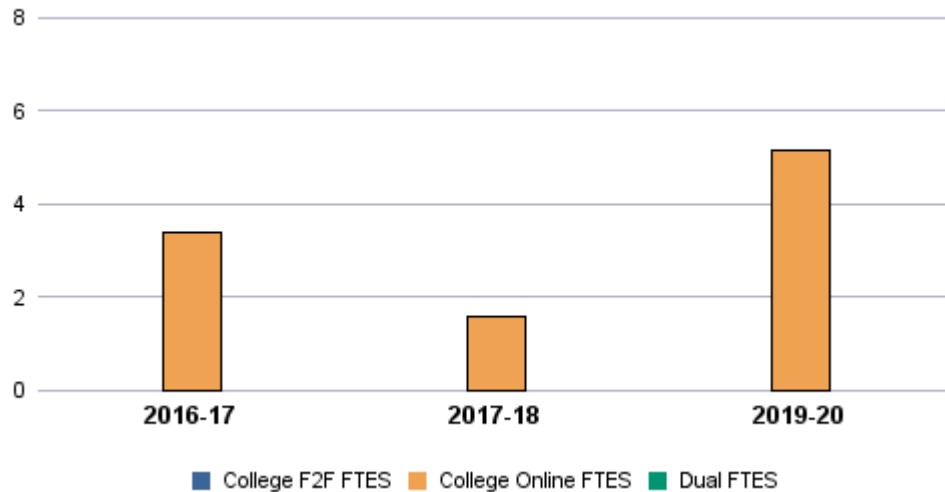


COMPUTER PROGRAMMING EMPLOYABLE SKILLS CERT SUMMARY

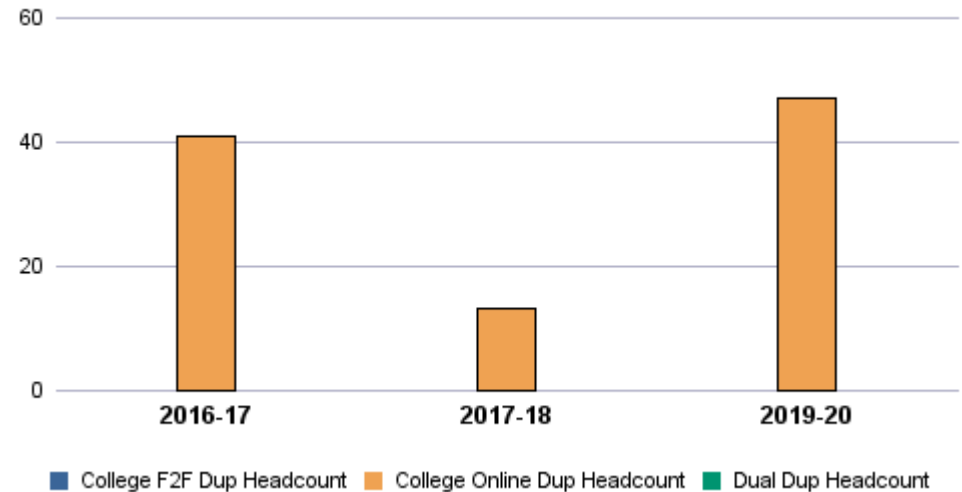
This report contains data from Academic Year (AY) 2016 to 2019. Information on program size based on full-time equivalent students (FTES), Student Success, and Student Achievement are presented below. The following categories are excluded: CAL FIRE, Culinary Jail, Fire In-Service, IEC, ISP, ISP Work Experience, ISSI, Municipal Fire, Noncredit, Noncredit CDCP, South Bay JPA, and Work Experience.

	Total Sections	College F2F Sections	College Online Sections	Dual Sections	Total FTES	College F2F FTES	College Online FTES	Dual FTES	Total Duplicated Headcount	College F2F Duplicated Headcount	College Online Duplicated Headcount	Dual Duplicated Headcount
2016-17	2	0	2	0	3.38	0.00	3.38	0.00	41	0	41	
2017-18	1	0	1	0	1.59	0.00	1.59	0.00	13	0	13	
2019-20	3	0	3	0	5.13	0.00	5.13	0.00	47	0	47	
2-Yr Chg	50.0%	---	50.0%	---	52.0%	---	52.0%	---	14.6%	---	14.6%	---
1-Yr Chg	200.0%	---	200.0%	---	223.1%	---	223.1%	---	261.5%	---	261.5%	---

RESIDENT FTES



DUPLICATED HEADCOUNT



2019-20 ANNUAL PROGRAM REVIEW

Computer Programming Employable Skills Cert

Demographics: College F2F and College Online

	2016-17		2017-18		2019-20	
	N	%	N	%	N	%
Male	21	65.6%	7	53.8%	24	80.0%
Female	11	34.4%	6	46.2%	6	20.0%

	2016-17		2017-18		2019-20	
	N	%	N	%	N	%
African American	2	6.3%	1	7.7%	1	3.3%
Asian	0	0.0%	1	7.7%	6	20.0%
Hispanic	11	34.4%	2	15.4%	7	23.3%
Native Amer/Alaska Native	0	0.0%	0	0.0%	1	3.3%
Pacific Islander	0	0.0%	1	7.7%	0	0.0%
White Non-Hispanic	18	56.3%	7	53.8%	11	36.7%
Two or more races	0	0.0%	1	7.7%	2	6.7%
Unknown	1	3.1%	0	0.0%	2	6.7%

	2016-17		2017-18		2019-20	
	N	%	N	%	N	%
Age < 25	20	62.5%	7	53.8%	22	73.3%
Age 25 - 49	11	34.4%	6	46.2%	7	23.3%
Age 50 +	1	3.1%	0	0.0%	1	3.3%

	2016-17	2017-18	2019-20
Median Age	23	23	21
Youngest	15	14	16
Oldest	54	37	61

2019-20 ANNUAL PROGRAM REVIEW

Computer Programming Employable Skills Cert

Demographics: Dual

	N	%
	0	0.0%

	N	%
	0	0.0%

Median Age	0	
Youngest		
Oldest		

2019-20 ANNUAL PROGRAM REVIEW

Computer Programming Employable Skills Cert

Course Success:
College F2F and
College Online

	2016-17		2017-18		2019-20	
	Enrollment	Success	Enrollment	Success	Enrollment	Success
Male	25	80.0%	7	85.7%	31	90.3%
Female	10	60.0%	3	100.0%	6	50.0%

	2016-17		2017-18		2019-20	
	Enrollment	Success	Enrollment	Success	Enrollment	Success
African American	2	50.0%	0	0.0%	1	0.0%
Asian	0	0.0%	1	100.0%	3	66.7%
Hispanic	11	72.7%	0	0.0%	6	83.3%
Native Amer/Alaska Native	0	0.0%	0	0.0%	1	100.0%
Pacific Islander	0	0.0%	1	100.0%	0	0.0%
White Non-Hispanic	20	75.0%	7	85.7%	23	95.7%
Two or more races	0	0.0%	1	100.0%	3	33.3%
Unknown	2	100.0%	0	0.0%	0	0.0%

	2016-17		2017-18		2019-20	
	Enrollment	Success	Enrollment	Success	Enrollment	Success
Age < 25	26	73.1%	6	83.3%	25	84.0%
Age 25 - 49	9	77.8%	4	100.0%	9	77.8%
Age 50 +	0	0.0%	0	0.0%	3	100.0%

	2016-17		2017-18		2019-20	
	Enrollment	Success	Enrollment	Success	Enrollment	Success
Online Education	35	74.3%	10	90.0%	37	83.8%

NOTE: Enrollment = duplicated headcount, excluding audits, noncredit, and drops w/ no record.

2019-20 ANNUAL PROGRAM REVIEW

Computer Programming Employable Skills Cert

Course Success:
Dual

	Enrollment	Success
	0	0.0%

	Enrollment	Success
	0	0.0%

NOTE: Enrollment = duplicated headcount, excluding audits, noncredit, and drops w/ no record.

2019-20 ANNUAL PROGRAM REVIEW

Computer Programming Employable Skills Cert

2019-20 COURSE STATISTICS

COMPUTER PROGRAMMING EMPLOYABLE SKILLS CERT PRODUCTIVITY* (2019-20):	250.67
% FULL TIME INSTRUCTORS** (2019-20):	100%
% ADJUNCT INSTRUCTORS** (2019-20):	0%

COLLEGE F2F	Sections Offered	Cancel %	FT % **	Adjunct % **	Avg Census Enroll	Avg End of Term Enroll	Retention % ***	Success % ***	FTEs	WSCH	FTEF	Productivity
		---					0.0%					---
Total		---					0.0%					

COLLEGE ONLINE	Sections Offered	Cancel %	FT % **	Adjunct % **	Avg Census Enroll	Avg End of Term Enroll	Retention % ***	Success % ***	FTEs	WSCH	FTEF	Productivity
CIS-120A-01 Computer Programming I	1	0.0%	100%	0%	22.0	17.0	77.3%	70.6%	2.32	121	0.11	352.00
CIS-120B-01 Computer Programming II	1	0.0%	100%	0%	10.0	10.0	100.0%	90.0%	1.22	55	0.11	160.00
CIS-120C-01 Computer Programming III	1	0.0%	100%	0%	15.0	10.0	66.7%	100.0%	1.59	83	0.11	240.00
Total	3	0.0%	100%	0%	15.7	12.3	78.7%	83.8%	5.13	259	0.34	

DUAL	Sections Offered	Cancel %	FT % **	Adjunct % **	Avg Census Enroll	Avg End of Term Enroll	Retention % ***	Success % ***	FTEs	WSCH	FTEF	Productivity
		---					0.0%					---
Total		---					0.0%					

* Excludes Summer, noncredit, work experience, internship, and cancelled sections

** Excludes summer assignments. Based on instructional workload and the percentage of workload assigned under full-time contracts versus adjunct contracts

*** Withdrawal and success statistics exclude noncredit classes.

2019-20 ANNUAL PROGRAM REVIEW

IT Technician – Cybersecurity Cert of Achievement

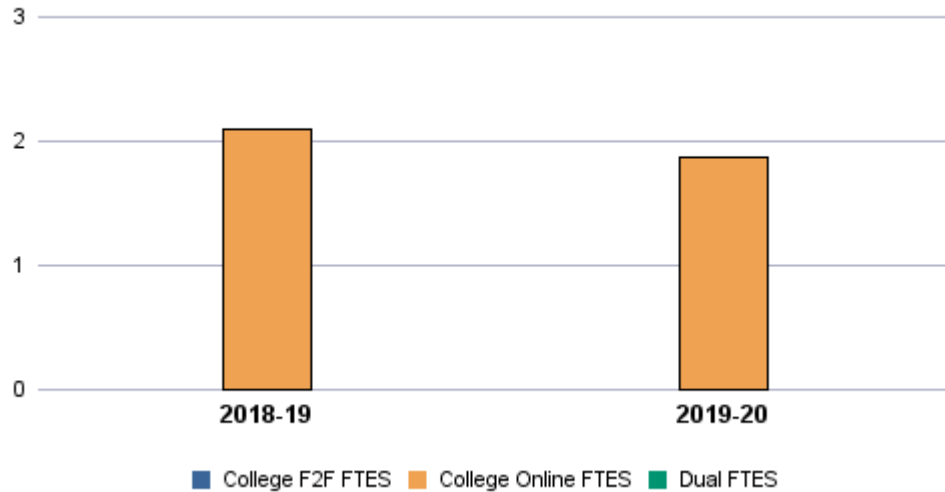


IT TECHNICIAN – CYBERSECURITY CERT OF ACHIEVEMENT SUMMARY

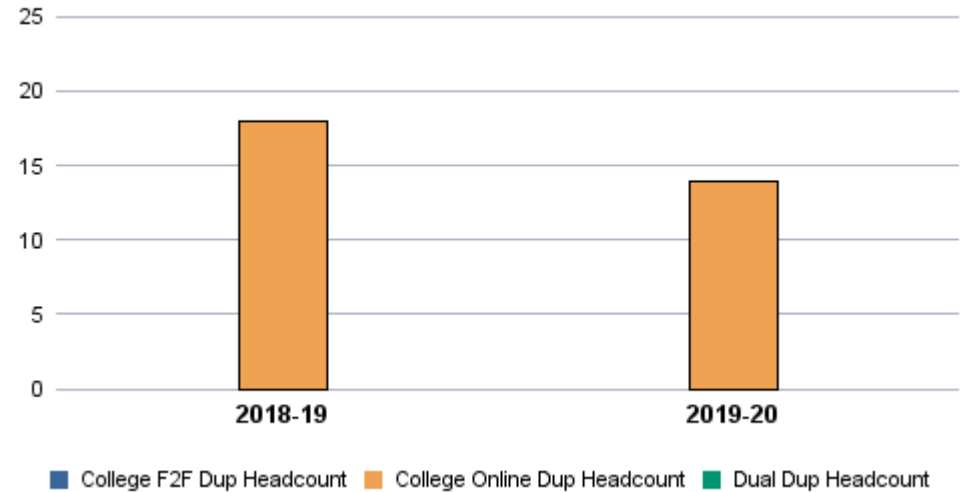
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	Total Sections	College F2F Sections	College Online Sections	Dual Sections	Total FTES	College F2F FTES	College Online FTES	Dual FTES	Total Duplicated Headcount	College F2F Duplicated Headcount	College Online Duplicated Headcount	Dual Duplicated Headcount
2018-19	3	0	3	0	2.10	0.00	2.10	0.00	18	0	18	
2019-20	2	0	2	0	1.87	0.00	1.87	0.00	14	0	14	
1-Yr Chg	-33.3%	---	-33.3%	---	-11.1%	---	-11.1%	---	-22.2%	---	-22.2%	---
1-Yr Chg	-33.3%	---	-33.3%	---	-11.1%	---	-11.1%	---	-22.2%	---	-22.2%	---

RESIDENT FTES



DUPLICATED HEADCOUNT



2019-20 ANNUAL PROGRAM REVIEW

IT Technician – Cybersecurity Cert of Achievement

Demographics: College F2F and College Online

	2018-19		2019-20	
	N	%	N	%
Male	10	83.3%	10	71.4%
Female	2	16.7%	4	28.6%

	2018-19		2019-20	
	N	%	N	%
African American	0	0.0%	0	0.0%
Asian	1	8.3%	0	0.0%
Hispanic	1	8.3%	7	50.0%
White Non-Hispanic	8	66.7%	4	28.6%
Two or more races	2	16.7%	2	14.3%
Unknown	0	0.0%	1	7.1%

	2018-19		2019-20	
	N	%	N	%
Age < 25	7	58.3%	3	21.4%
Age 25 - 49	3	25.0%	9	64.3%
Age 50 +	2	16.7%	2	14.3%

	2018-19	2019-20
Median Age	25	33
Youngest	18	16
Oldest	66	68

2019-20 ANNUAL PROGRAM REVIEW

IT Technician – Cybersecurity Cert of Achievement

Demographics:
Dual

	N	%
	0	0.0%

	N	%
	0	0.0%

Median Age	0	
Youngest		
Oldest		

2019-20 ANNUAL PROGRAM REVIEW

IT Technician – Cybersecurity Cert of Achievement

Course Success:
College F2F and
College Online

	2018-19		2019-20	
	Enrollment	Success	Enrollment	Success
Male	15	86.7%	9	88.9%
Female	3	100.0%	3	66.7%

	2018-19		2019-20	
	Enrollment	Success	Enrollment	Success
Asian	1	100.0%	0	0.0%
Hispanic	1	0.0%	5	80.0%
White Non-Hispanic	12	91.7%	4	100.0%
Two or more races	4	100.0%	2	50.0%
Unknown	0	0.0%	1	100.0%

	2018-19		2019-20	
	Enrollment	Success	Enrollment	Success
Age < 25	7	71.4%	3	100.0%
Age 25 - 49	8	100.0%	7	71.4%
Age 50 +	3	100.0%	2	100.0%

	2018-19		2019-20	
	Enrollment	Success	Enrollment	Success
Online Education	18	88.9%	12	83.3%

NOTE: Enrollment = duplicated headcount, excluding audits, noncredit, and drops w/ no record.

2019-20 ANNUAL PROGRAM REVIEW

IT Technician – Cybersecurity Cert of Achievement

Course Success:
Dual

	Enrollment	Success
	0	0.0%

	Enrollment	Success
	0	0.0%

NOTE: Enrollment = duplicated headcount, excluding audits, noncredit, and drops w/ no record.

2019-20 ANNUAL PROGRAM REVIEW

IT Technician – Cybersecurity Cert of Achievement

2019-20 COURSE STATISTICS

IT TECHNICIAN – CYBERSECURITY CERT OF ACHIEVEMENT PRODUCTIVITY* (2019-20):											112
% FULL TIME INSTRUCTORS** (2019-20):											0%
% ADJUNCT INSTRUCTORS** (2019-20):											100%

COLLEGE F2F	Sections Offered	Cancel %	FT % **	Adjunct % **	Avg Census Enroll	Avg End of Term Enroll	Retention % ***	Success % ***	FTEs	WSCH	FTEF	Productivity
		---					0.0%					---
Total		---					0.0%					

COLLEGE ONLINE	Sections Offered	Cancel %	FT % **	Adjunct % **	Avg Census Enroll	Avg End of Term Enroll	Retention % ***	Success % ***	FTEs	WSCH	FTEF	Productivity
BOT-122-01 Project Management Concepts	1	100.0%					0.0%			0		---
CIS-104-01 Information/Communication Tech	1	0.0%	0%	100%	10.0	9.0	90.0%	77.8%	1.33	60	0.13	160.00
CIS-105-01 Network Fundamentals	1	0.0%	0%	100%	4.0	3.0	75.0%	100.0%	0.53	24	0.13	64.00
CIS-106-01 Microsoft Client OS Admin	1	100.0%					0.0%			0		---
CIS-107-01 Microsoft Server OS Admin	1	100.0%					0.0%			0		---
Total	5	60.0%	0%	100%	7.0	6.0	85.7%	83.3%	1.87	84	0.25	

DUAL	Sections Offered	Cancel %	FT % **	Adjunct % **	Avg Census Enroll	Avg End of Term Enroll	Retention % ***	Success % ***	FTEs	WSCH	FTEF	Productivity
		---					0.0%					---
Total		---					0.0%					

* Excludes Summer, noncredit, work experience, internship, and cancelled sections

** Excludes summer assignments. Based on instructional workload and the percentage of workload assigned under full-time contracts versus adjunct contracts

*** Withdrawal and success statistics exclude noncredit classes.