

LAKE TAHOE COMMUNITY COLLEGE COMPUTER AND INFORMATION SYSTEMS ADVISORY COMMITTEE MEETING

WEDNESDAY FEBRUARY 8, 2023



- Welcome and Introductions
- Annual Program Review & Updates (2021-2022)
- Feedback from Industry Partners
- Perkins Funding



Computer and Information Systems Advisory Committee Meeting Minutes February 8, 2023

Welcome and Introductions

The meeting called to order at 3:03 p.m.

Present: Bergner, Nicole (Counselor, LTCC), David, Kerry (Board Trustee, LTCC), Davila, Sasha (Counselor, LTCC), Deeds, Brad (Dean of Instruction & Workforce Development, LTCC), Richardson, Steve (CIS/Math Full-time Faculty, LTCC), Rhone, Jamie (CTE Program Specialist, LTCC), Skelly, Chris (Information Technology Manager, South Tahoe Public Utility District), Smith, Joshua (Director of Information Technology, LTCC), and West, Sharon (CIS Adjunct Faculty, LTCC)

Annual Program Review (2021-2022)

Lake Tahoe Community College's (LTCC) Computer Information & Systems (CIS) program contains two parallel certificates, an "IT technician/Cybersecurity" certificate of achievement and associate degree and a "Computer Programming" foundational skills certificate.

The IT Technician/Cybersecurity degree and certificate includes six courses for 27 total units. Students can finish the program in less than one year (3 academic quarters). LTCC has committed to offering two courses per quarter. There is almost zero unemployment in cybersecurity, and very high job demand for IT professionals. Students prepare for industry valued certifications in CompTIA A+, Network+, and Security+. Eric Egan has been teaching some of these courses. He has a master's degree in cybersecurity and is a great asset to the program. This program has become quite successful, despite declining California community college enrollments. It was designed by a full-time tenured faculty member, Annette Nylander, from Sierra College, and launched in the fall of 2021. Since then, Sierra College has been connecting LTCC with instructors. Their most recent referral is Sharon West, who will be teaching BOT 122 - Project Management Concepts and Software, part of the IT Technician/Cybersecurity certificate and degree.

The majority of the students are white/non-Hispanic males, at 68.9%, and between the ages of 25-49 years, with a slightly lower success rate, 68%, than females, at 73.4%. Females comprise 28.9% of enrollments. These numbers are small, which may be a reflection of a wider gender gap in the industry. Full-time Equivalent Students (FTES) is 13.34 annually and the total duplicated headcount is 112. In the last three years, CIS FTES has increased by 534.9%. FTES is how California Community Colleges are paid, which is the number of enrolled students multiplied by total contact hours, divided by 525. Funding also is measured by certificate and degree completion, and special programs, such as Extended Opportunity Program and Service (EOPS). These programs target the underrepresented population and first-generation students. There were three degrees and one certificate awarded in 2021-2022.

Steve Richardson, Full-time faculty, has been teaching a number of Math and Computer & Information Systems (CIS) courses for LTCC. Steve also teaches the year-long Computer Programming sequence, CIS-120A/B/C, which transfers to the CSU system. This program prepares students for examinations leading to Oracle certification in Associate, Java SE 7 Programmer and Professional, Java SE 7 Programmer. Most students who take these courses want to be a game programmer, which is a high bar to achieve. Students have to first learn how to write simple programs, computing with Java, advanced data structures, programming for the web, and database programming. It's a lot to learn in one year.

The majority of the students are white/non-Hispanic males, at 85.7%, and over the age of 25 years, with a slightly higher success rate, at 82.6% than females at 66.7%. Females compromise 14.3% of this program. FTES is 2.81 and the total duplicated headcount is 31 students. T
This program is offered every other year.

General Discussion

Chris Skelly, IT Manager, has been with South Tahoe Public Utilities District (STUPD) for 16 years. He started as an IT tech and worked up as a Network Admin and IT Manager. STUPD has a few positions open. The most recent position available is for Accounting Technician. This position is responsible for day-to-day operations of accounts, including accounts payable and payroll processing. They are looking for someone with those skill sets in the cyber security and project management courses. He would like to see the cyber security courses cover some type of cloud cybersecurity, as IT Technicians also need to know the tools available to help administrators secure their environment from phishing and password hacks. STUPD is struggling with this and have hired consultants to help with this issue. Kerry David, Board Trustee, is glad LTCC is talking about this. As an employer, he has a lot of documents that needs to be protected from ransomware.

Chris has also noticed, in the business world, paper processing is becoming extinct. At STUPD, employees need some type of computer experience to operate them. In the past year, 50 tablets have been deployed to almost every crew member. They use them to provide data on the condition of a linear asset, whether it's a sewer or water pipe.

Josh Smith, IT Director at the college, is glad to see the Project Management (BOT 122) course imbedded into the IT Technician/Cybersecurity certificate and degree. He is seeing more organizations starting to embrace it. Demand for cybersecurity is increasing as the business environment shifts to cloud storage space and internet administration. As the internet is becoming more widespread today, commercial organization data and personal data are at risk of being exploited. Josh would like to get involved somehow with BOT 122 students. He also might recommend some of his staff take it. More organizations are requiring experience, as well as certification and the BOT 122 course provides the educational hours. Students also get a discount for the Project Management Professional Project Management Professional (PMP) certification. The Municipal Information Systems Association of California (MISAC) often holds PMP courses and is comprised of public agency information technology professionals working throughout California. MISAC promotes the understanding and strategic use of information technology within local government agencies through sharing of best practices.

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 3:49 p.m.

Respectively submitted,
Melissa Liggett Career & Technical Education Technician

ANNUAL PROGRAM REVIEW DATA: 2018-19 to 2021-22

IT Technician – Cybersecurity

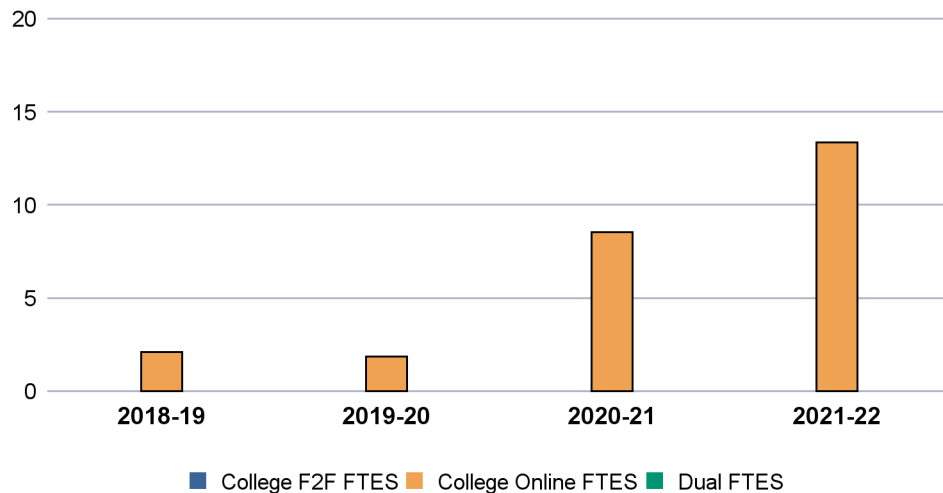


IT TECHNICIAN – CYBERSECURITY SUMMARY

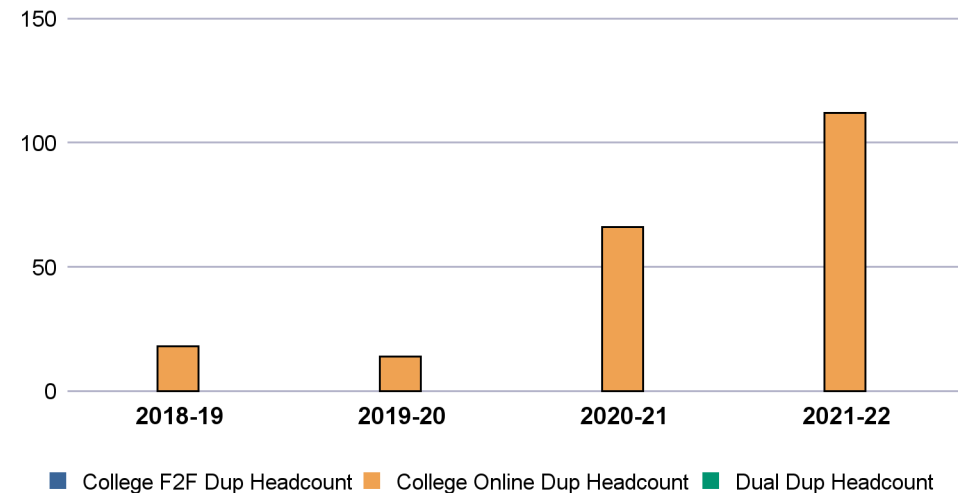
This report contains data from Academic Year (AY) 2018 to 2021. Information on program size based on full-time equivalent students (FTES), Student Success, and Student Achievement are presented below. The following categories are excluded: CAL FIRE, Culinary Jail, Fire In-Service, IEC, ISP, ISP Work 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
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	
2020-21	5	0	5	0	8.54	0.00	8.54	0.00	66	0	66	
2021-22	6	0	6	0	13.34	0.00	13.34	0.00	112	0	112	
3-Yr Chg	100.0%	---	100.0%	---	534.9%	---	534.9%	---	522.2%	---	522.2%	---
1-Yr Chg	20.0%	---	20.0%	---	56.3%	---	56.3%	---	69.7%	---	69.7%	---

RESIDENT FTES



DUPLICATED HEADCOUNT



2021-22 ANNUAL PROGRAM REVIEW

IT Technician – Cybersecurity

Demographics: College F2F and College Online

	2018-19		2019-20		2020-21		2021-22	
	N	%	N	%	N	%	N	%
Male	10	83.3%	10	71.4%	22	68.8%	31	68.9%
Female	2	16.7%	4	28.6%	10	31.3%	13	28.9%
Unknown	0	0.0%	0	0.0%	0	0.0%	1	2.2%

	2018-19		2019-20		2020-21		2021-22	
	N	%	N	%	N	%	N	%
African American	0	0.0%	0	0.0%	0	0.0%	1	2.2%
Asian	1	8.3%	0	0.0%	0	0.0%	3	6.7%
Hispanic	1	8.3%	7	50.0%	11	34.4%	17	37.8%
Pacific Islander	0	0.0%	0	0.0%	0	0.0%	0	0.0%
White Non-Hispanic	8	66.7%	4	28.6%	18	56.3%	18	40.0%
Two or more races	2	16.7%	2	14.3%	3	9.4%	5	11.1%
Unknown	0	0.0%	1	7.1%	0	0.0%	1	2.2%

	2018-19		2019-20		2020-21		2021-22	
	N	%	N	%	N	%	N	%
Age < 25	7	58.3%	3	21.4%	9	28.1%	18	40.0%
Age 25 - 49	3	25.0%	9	64.3%	21	65.6%	26	57.8%
Age 50 +	2	16.7%	2	14.3%	2	6.3%	1	2.2%

	2018-19	2019-20	2020-21	2021-22
Median Age	25	33	31	25
Youngest	18	16	17	14
Oldest	66	68	61	58

2021-22 ANNUAL PROGRAM REVIEW

IT Technician – Cybersecurity

Demographics: Dual

	N	%
	0	0.0%

	N	%
	0	0.0%

Median Age	0	
Youngest		
Oldest		

2021-22 ANNUAL PROGRAM REVIEW

IT Technician – Cybersecurity

Course Success:
College F2F and
College Online

	2018-19		2019-20		2020-21		2021-22	
	Enrollment	Success	Enrollment	Success	Enrollment	Success	Enrollment	Success
Male	15	86.7%	9	88.9%	46	82.6%	79	73.4%
Female	3	100.0%	3	66.7%	12	75.0%	25	68.0%
Unknown	0	0.0%	0	0.0%	0	0.0%	1	100.0%

	2018-19		2019-20		2020-21		2021-22	
	Enrollment	Success	Enrollment	Success	Enrollment	Success	Enrollment	Success
African American	0	0.0%	0	0.0%	0	0.0%	2	0.0%
Asian	1	100.0%	0	0.0%	0	0.0%	9	44.4%
Hispanic	1	0.0%	5	80.0%	19	78.9%	39	66.7%
White Non-Hispanic	12	91.7%	4	100.0%	35	82.9%	38	76.3%
Two or more races	4	100.0%	2	50.0%	4	75.0%	16	100.0%
Unknown	0	0.0%	1	100.0%	0	0.0%	1	100.0%

	2018-19		2019-20		2020-21		2021-22	
	Enrollment	Success	Enrollment	Success	Enrollment	Success	Enrollment	Success
Age < 25	7	71.4%	3	100.0%	15	73.3%	50	72.0%
Age 25 - 49	8	100.0%	7	71.4%	39	84.6%	54	72.2%
Age 50 +	3	100.0%	2	100.0%	4	75.0%	1	100.0%

	2018-19		2019-20		2020-21		2021-22	
	Enrollment	Success	Enrollment	Success	Enrollment	Success	Enrollment	Success
Online Education	18	88.9%	12	83.3%	58	81.0%	105	72.4%

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

2021-22 ANNUAL PROGRAM REVIEW

IT Technician – Cybersecurity

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.

2021-22 ANNUAL PROGRAM REVIEW

IT Technician – Cybersecurity

2021-22 COURSE STATISTICS

IT TECHNICIAN – CYBERSECURITY PRODUCTIVITY* (2021-22):												298.67
% FULL TIME INSTRUCTORS** (2021-22):												17%
% ADJUNCT INSTRUCTORS** (2021-22):												83%

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	0.0%	0%	100%	13.0	13.0	100.0%	69.2%	1.47	78	0.13	208.00
CIS-104-01 Information/Communication Tech	1	0.0%	100%	0%	25.0	22.0	88.0%	72.7%	2.80	150	0.13	400.00
CIS-105-01 Network Fundamentals	1	0.0%	0%	100%	20.0	18.0	90.0%	66.7%	2.40	120	0.13	320.00
CIS-106-01 Microsoft Client Os Admin	1	0.0%	0%	100%	18.0	18.0	100.0%	66.7%	2.27	108	0.13	288.00
CIS-107-01 Microsoft Server OS Admin	1	0.0%	0%	100%	15.0	15.0	100.0%	80.0%	2.00	90	0.13	240.00
CIS-108-01 Intro to Info System-COMPTIA	1	0.0%	0%	100%	21.0	21.0	100.0%	71.4%	2.40	126	0.13	336.00
Total	6	0.0%	17%	83%	18.7	17.8	95.5%	71.0%	13.34	672	0.75	

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.

STUDENT ACHIEVEMENT

CIS IT TECH CYBERSECURITY (CSY)

SUMMARY

This report contains data related to student achievement, represented by the number of degrees and certificates awarded by the CIS IT Tech Cybersecurity Department. These data may include students enrolled through special programs, such as Incarcerated Students Program, South Bay JPA, and ISSI.

Year	Award Type	Title	# of Awards
2021-22	AA Degree	CIS IT Tech Cybersecurity	3
	Certificate	CIS IT Tech Cybersecurity	1
2021-22 TOTAL:			4

ANNUAL PROGRAM REVIEW DATA: 2018-19 to 2021-22

Computer Programming

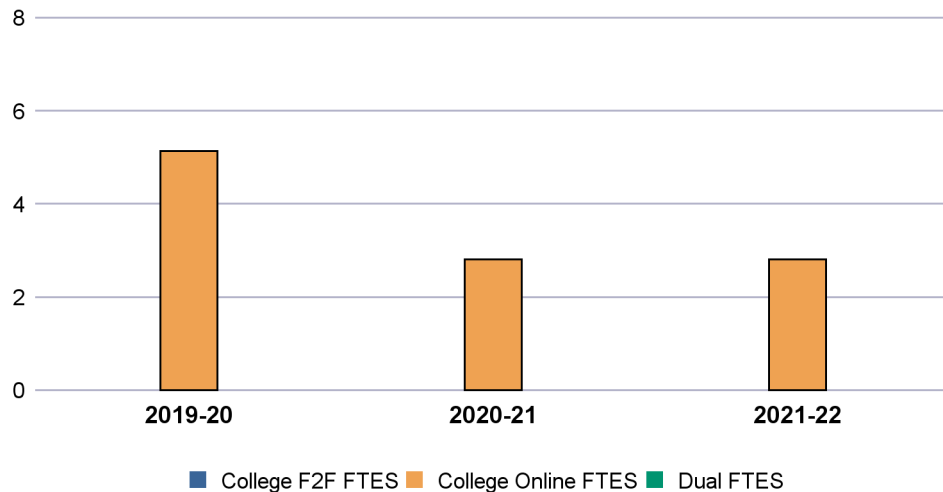


COMPUTER PROGRAMMING SUMMARY

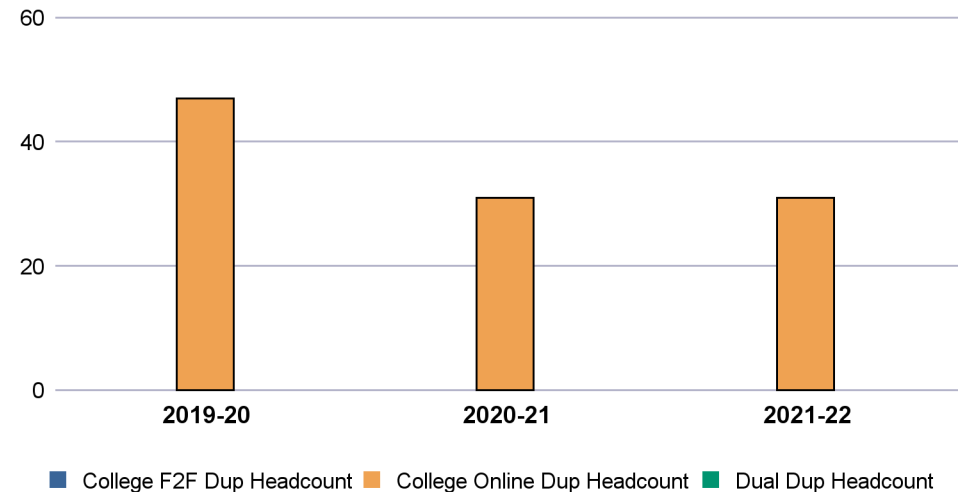
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	Total Sections	College F2F Sections	College Online Sections	Dual Sections	Total FTES	College F2F FTES	College Online FTES	Dual FTES	Total Duplicated Headcount	College F2F Duplicated Headcount	College Online Duplicated Headcount	Dual Duplicated Headcount
2019-20	3	0	3	0	5.13	0.00	5.13	0.00	47	0	47	
2020-21	3	0	3	0	2.81	0.00	2.81	0.00	31	0	31	
2021-22	3	0	3	0	2.81	0.00	2.81	0.00	31	0	31	
2-Yr Chg	0.0%	---	0.0%	---	-45.2%	---	-45.2%	---	-34.0%	---	-34.0%	---
1-Yr Chg	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---	0.0%	---

RESIDENT FTES



DUPLICATED HEADCOUNT



2021-22 ANNUAL PROGRAM REVIEW

Computer Programming

Demographics: College F2F and College Online

	2019-20		2020-21		2021-22	
	N	%	N	%	N	%
Male	24	80.0%	19	86.4%	18	85.7%
Female	6	20.0%	3	13.6%	3	14.3%

	2019-20		2020-21		2021-22	
	N	%	N	%	N	%
African American	1	3.3%	0	0.0%	0	0.0%
Asian	6	20.0%	3	13.6%	2	9.5%
Hispanic	8	26.7%	7	31.8%	6	28.6%
White Non-Hispanic	11	36.7%	11	50.0%	10	47.6%
Two or more races	2	6.7%	0	0.0%	3	14.3%
Unknown	2	6.7%	1	4.5%	0	0.0%

	2019-20		2020-21		2021-22	
	N	%	N	%	N	%
Age < 25	22	73.3%	19	86.4%	17	81.0%
Age 25 - 49	7	23.3%	3	13.6%	4	19.0%
Age 50 +	1	3.3%	0	0.0%	0	0.0%

	2019-20	2020-21	2021-22
Median Age	21	21	22
Youngest	16	16	16
Oldest	61	43	40

2021-22 ANNUAL PROGRAM REVIEW

Computer Programming

Demographics: Dual

	N	%
	0	0.0%

	N	%
	0	0.0%

Median Age	0	
Youngest		
Oldest		

2021-22 ANNUAL PROGRAM REVIEW

Computer Programming

Course Success: College F2F and College Online

	2019-20		2020-21		2021-22	
	Enrollment	Success	Enrollment	Success	Enrollment	Success
Male	31	90.3%	22	86.4%	23	82.6%
Female	6	50.0%	4	75.0%	3	66.7%

	2019-20		2020-21		2021-22	
	Enrollment	Success	Enrollment	Success	Enrollment	Success
African American	1	0.0%	0	0.0%	0	0.0%
Asian	3	66.7%	4	75.0%	2	100.0%
Hispanic	7	85.7%	6	66.7%	11	90.9%
White Non-Hispanic	23	95.7%	13	92.3%	10	60.0%
Two or more races	3	33.3%	0	0.0%	3	100.0%
Unknown	0	0.0%	3	100.0%	0	0.0%

	2019-20		2020-21		2021-22	
	Enrollment	Success	Enrollment	Success	Enrollment	Success
Age < 25	25	84.0%	24	87.5%	21	76.2%
Age 25 - 49	9	77.8%	2	50.0%	5	100.0%
Age 50 +	3	100.0%	0	0.0%	0	0.0%

	2019-20		2020-21		2021-22	
	Enrollment	Success	Enrollment	Success	Enrollment	Success
Online Education	37	83.8%	26	84.6%	26	80.8%

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

2021-22 ANNUAL PROGRAM REVIEW

Computer Programming

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.

2021-22 ANNUAL PROGRAM REVIEW

Computer Programming

2021-22 COURSE STATISTICS

COMPUTER PROGRAMMING PRODUCTIVITY* (2021-22):											165.33
% FULL TIME INSTRUCTORS** (2021-22):											100%
% ADJUNCT INSTRUCTORS** (2021-22):											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%	15.0	12.0	80.0%	75.0%	1.34	83	0.11	240.00
CIS-120B-01 Computer Programming II	1	0.0%	100%	0%	6.0	6.0	100.0%	100.0%	0.61	33	0.11	96.00
CIS-120C-01 Computer Programming III	1	0.0%	100%	0%	10.0	8.0	80.0%	75.0%	0.86	55	0.11	160.00
Total	3	0.0%	100%	0%	10.3	8.7	83.9%	80.8%	2.81	171	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.