



CTE Approval Self-Study Report

Cyber Security

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Self-study

Self-study is the first step in the career and technical education approval process. The self-study review is required for all existing programs and new programs seeking approval. Its purpose is to bring together partners to review the CTE program, propose relevant modifications, and evaluate the degree to which the program meets the policy requirements approved by the Board of Regents on February 6, 2001.

Self-study review will include:

Curriculum review

Benchmarks for student performance and student assessment

Teacher certification and highly-qualified status of instructional staff

Work-based learning opportunities

Teacher and student schedules

Resources, including staff, facilities, and equipment

Accessibility for all students

Work skills employability profile

Professional development plans

Projected number of students to be served

Source: <http://www.p12.nysed.gov/cte/ctepolicy/guide.html>

Cybersecurity (Information Security Analysts)

*Quick Facts: Information Security Analysts	
2020 Median Pay	\$103,590 per year \$49.80 per hour
Typical Entry-Level Education	Bachelor's degree
Work Experience in a Related Occupation	Less than 5 years
On-the-job Training	None
Number of Jobs, 2020	141,200
Job Outlook, 2020-30	33% (Much faster than average)
Employment Change, 2020-30	47,100
* The Bureau of Labor Statistics does not provide a specific description of the Cybersecurity. The data and descriptions here are from their Information Security Analyst information.	

What Information Security Analysts Do

Information security analysts plan and carry out security measures to protect an organization’s computer networks and systems. Their responsibilities are continually expanding as the number of cyberattacks increases.

Work Environment

Most information security analysts work for computer companies, consulting firms, or business and financial companies.

How to Become an Information Security Analyst

Most information security analyst positions require a bachelor’s degree in a computer-related field. Employers usually prefer to hire analysts with experience in a related occupation.

Pay

The median annual wage for information security analysts was \$103,590 in May 2020.

Job Outlook

Employment of information security analysts is projected to grow 33 percent from 2020 to 2030, much faster than the average for all occupations. Demand for information security analysts is expected to be very high, as these analysts will be needed to create innovative solutions to prevent hackers from stealing critical information or causing problems for computer networks.

Related Occupations

Occupational Title	SOC Code	Employment, 2020	Projected Employment,2030	Change, 2020-30	
				Percent	Numeric
Computer and information research scientists	15-1111	33,000	40,200	22	7,200
Computer and information systems managers	11-3021	482,000	534,600	11	52,700
Information security analysts	15-1212	141,200	188,300	33	47,100
Computer user support specialists	15-1232	654,800	712,800	9	58,000
Computer network support specialists	15-1231	189,800	204,000	7	14,200
Computer systems analysts	15-1211	607,800	650,600	7	42,800

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Information Security Analysts, on the Internet at <https://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm> (visited March 31, 2022).

A. Curriculum Review

The curriculum review is a step in the self-study process. It is an opportunity for members of the self-study team to evaluate the proposed curriculum for completeness in terms of the knowledge, skills, and competencies required in the program field. The team reviews the curriculum to ensure that course content in the career and technical education program meets State Education Department regulations, contributes to achievement of state and industry standards, and prepares students for successful completion of a technical assessment. Approved curriculum content is nonduplicative, challenging, organized along a continuum of difficulty, and free of bias.

CTE program approval does not constitute Department approval or endorsement of proprietary curriculum or related curriculum products. Program approval indicates only that a school district or BOCES has provided the Department with assurances that the curriculum review has been completed.

Process

- The school district or BOCES identifies the faculty members and other individuals who will be involved in conducting the curriculum review
- The school district or BOCES determines the procedures used in completing the curriculum review
- Reviewers confirm that CTE program content aligns with state CDOS standards, relevant state academic standards, and related business and industry standards
- Reviewers confirm that CTE program content includes integrated or specialized units of credit
- Reviewers confirm that the CTE program meets unit of credit and other distributive requirements
-

Documentation

Documentation of the curriculum review is maintained by the school district or BOCES and is updated whenever modifications are made to the approved CTE program. Recommendations from curricular review should be included in the self-study report and reviewed by the external committee.

Resources

New York State graduation requirements

<http://www.emsc.nysed.gov/part100/pages/1005.html>

Source: <http://www.p12.nysed.gov/cte/ctepolicy/guide.html>



Cyber Security

We live in a digital world. Whether it's keeping in touch with friends, operating a city's energy grid or strengthening national security, it happens online. The need to secure our networks has never been greater. The number of cyber attacks increases dramatically every year, and people with technical skills are needed to ensure online security.

As a student in the Cybersecurity program at the Public Service Leadership Academy at Fowler, you'll learn how to make online information more secure and protect users from the growing threat of cyber attacks. This program teaches the core concepts needed to understand, assess and protect information security systems.

This pathway will develop the knowledge and skills needed to master the core concepts in cybersecurity.

The pathway will cover the three foundation areas of information security:

- Networking
- Operating Systems
- Systems Administration

CAREER OPPORTUNITIES:

Security Manager, Cyber Threat Analyst

Syracuse City School District
Career and Technical Education Program
Course Syllabus
CSS100: Cybersecurity 100



Program Overview

Cybersecurity is the study of information technology security and focuses on protecting computers, networks, programs, and data from unintended or unauthorized access, change, or destruction. The Cybersecurity Program is designed to help students explore the process of securing computers and computer networks, and conducting investigations of cybercrimes and forensic analysis of digital devices. Students will be equipped with the knowledge and skills to manage helpdesk functions in small to medium business IT operations as well as continue on to post-secondary training for careers in computer and network security, cybercrime investigation and computer forensics. Throughout the program, students gain mastery of these skills by performing simulated hands-on exercises. Students who successfully complete the program can earn up to nine college credits and obtain CompTIA A+ Certification, a fundamental accreditation for work in many IT fields.

Course Description

This course will introduce students to the fundamentals of computers and computer systems. Through hands-on experience, students will learn the basics of computers, hardware, peripherals, and networking. This course will give students the foundational knowledge and skills for the Computer Science sequence.

Work-Based Learning

Students will be connected with working computer science professionals in the community through Career Coaching, field trips and job shadowing which could lead to further opportunities for direct job training and real-world experience. Students will create and maintain a portfolio of their work-based learning experiences throughout the program to document the development of their skills.

Pre-Requisites

N/A

Course Objectives

1. Students will understand the historical and societal context of computer science.
2. Students will understand the career ready practices that will lead to success in the computer science pathway.
3. Students will understand computer operations and how it relates to computer science.
4. Students will be able to assemble and troubleshoot computers.
5. Students will understand the relation between the physical and virtual worlds.

Integrated Academics

N/A

Equipment and Supplies

- **School will provide:** All necessary technology and classroom equipment
- **Student will provide:** N/A

Textbook

TBD

Grading

10%	Class Attendance and Participation
10%	Oral Presentation
25%	Assignments
25%	Mid-Term Exam
30%	Final Exam

Additional Course Policies

- Students are required to follow all safety procedures.

- All work is due at the time and day specified when the assignment is given. Submission details for work to be graded will be given at the time the work is assigned.
- Quizzes will be given throughout the semester. The lowest quiz score (one score only) will be dropped when calculating the final course grade.

Course Calendar

Quarter	Units of Study
1	<ul style="list-style-type: none"> • Introduction to the Program, the School, and the Future • Setting Up for Success • The Importance of Communication • The 7 Habits of Highly Effective Teens • Career Ready Practices and Workplace Readiness Skills • Proper Keyboarding Technique
2	<ul style="list-style-type: none"> • Digital Citizenship and Ethical Computing • How to Clean and Maintain Technology • Digital Portfolios, Resumes, and Work-Based Learning, • Safety in the Computer Lab • Protecting Ourselves and Our Technology • Introduction to the Computer Lab, Tools, and Resources • File Management, Storage and Backups
3	<ul style="list-style-type: none"> • Introduction to Word Processing and Microsoft Word • Introduction to Presentation Software and Microsoft PowerPoint • Introduction to Spreadsheets and Microsoft Excel • Introduction to Databases and Microsoft Access
4	<ul style="list-style-type: none"> • Introduction to Hardware • Introduction to Software • Introduction to Networking and Wireless Computing • Introduction to the Internet • Safe Use of the Internet, Social Media, and other Digital Tools • The Evolution of Technology Careers, Technology Trends and What's to Come • Finding and Applying for a Job • Review and Final Exam

Syracuse City School District
Career and Technical Education Program
Scope and Sequence
CSS100: Cybersecurity 100



Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Weeks 1-2 Introduction to the Program, the School, and the Future	<ul style="list-style-type: none"> What is the ultimate goal of this CTE program? What are the expectations for the CTE Computer Pathways classroom and lab? How do students keep themselves and others safe? How can students be successful in school and in the CTE program? How can students use technology appropriately and effectively? What is the district's Code of Conduct? What supports are available to students in the classroom, lab, school, and district? 	<ul style="list-style-type: none"> Explain the goals and expectations of the 4-year high school CTE program. Summarize classroom procedures and expectations. Describe the Code of Conduct and where to reference it. Identify classroom, lab, school, and district supports and resources. 	Written <ul style="list-style-type: none"> Workbook Research Project Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,7,10,11,12	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,4	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1 IT-NET 1	CSDF 9-12.IC.7
Weeks 3-4 Setting Up for Success	<ul style="list-style-type: none"> What academic and social-emotional resources are available to support students? How can students manage their time? How can students study effectively to prepare for a test? What notetaking methods are effective for students? How do students build a quality portfolio over the next four years? 	<ul style="list-style-type: none"> Describe the academic and social-emotional resources available to support students. Use curriculum delivery methods and other online resources to complete assignments and meet class requirements. Describe effective time management, note taking, and test taking strategies and methods that can be used in class. Explain what a portfolio is and how it will be developed over the course of four years. 	Written <ul style="list-style-type: none"> Workbook Research Project Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,6,7,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1 IT-NET 1	CSDF 9-12.DL.2

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	<ul style="list-style-type: none"> What are the graduation requirements for the program? What is the Graduation Requirements Checklist? What is the role of guidance counselors? What are SMART Goals? What is a rubric? 	<ul style="list-style-type: none"> Explain what the graduation requirements are for the program. Use the Graduation Requirements Checklist to track credits earned and credits needed each year. Describe the role of guidance counselors. Describe and set SMART Goals. Describe a rubric and explain its function. 			
Week 5 The Importance of Communication	<ul style="list-style-type: none"> Why is communication important? What methods of communication are there? When is it appropriate to use each of the different methods? What is the difference between professional and casual communication? 	<ul style="list-style-type: none"> Explain how vital the role of Communication is. Identify and describe the different methods of communication. Evaluate a scenario and the best method of communication to use in addressing and/or clarifying the situation. 	Written <ul style="list-style-type: none"> Workbook Research Project Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,7,8	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1 IT-NET 1	CSDF 9-12.DL.2
Weeks 6-7 The 7 Habits of Highly Effective Teens	<ul style="list-style-type: none"> What are the 7 Habits of Highly Effective Teens? What is the meaning of each? What are the risks of not using them? What would change if these habits were implemented? 	<ul style="list-style-type: none"> Describe the 7 habits of Highly Effective Teens are. Identify which habits they already possess and which they don't. Describe specific strategies for implementing those they're not using yet. 	Written <ul style="list-style-type: none"> Workbook Research Project Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,7,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1 IT-NET 1	CSDF 9-12.DL.2
Weeks 7-8 Career Ready Practices and Workplace Readiness Skills	<ul style="list-style-type: none"> What are the Career Ready Practices and what do they mean? What are examples of each? 	<ul style="list-style-type: none"> List and explain the twelve Career Ready practices and how they tie to success. 	Written <ul style="list-style-type: none"> Workbook Research Project Tests and Quizzes Self-Assessment Professional Portfolio Performance	Career Ready Practices CRP 1,2,4,7,8,10,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	<ul style="list-style-type: none"> What are Workplace Readiness Skills? What are the Workplace Readiness Skills and what do they mean? What are examples of each. What are the differences and similarities of Career Ready Practices and Workplace Readiness Skills? 	<ul style="list-style-type: none"> List and explain the Workplace Readiness practices and how they tie to success. Explain how both the Career Ready Practices and the Workplace Readiness Skills can be implemented throughout various classroom assignments and activities. 	<ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Pathway Standards IT-SUP 1 IT-NET 1	CSDF 9-12.IC.7
Weeks 9-11 Proper Keyboarding Technique	<ul style="list-style-type: none"> What is keyboarding/home-row typing? What are the characteristics of proper keyboarding technique? Why is practice so important? Why is it important to use home-row typing? What is ergonomics and why is it important? What is the function of each of the keys on the keyboard? What are the differences between keyboards? 	<ul style="list-style-type: none"> Demonstrate proper keyboarding technique and explain its benefits. Explain how to improve keyboarding skills. Explain the relationship between keyboarding speed and efficiency and practice. Explain the ergonomic concepts that can help avoid pain and injury. Describe various types of input devices, their differences, and their functionality. 	Written <ul style="list-style-type: none"> Workbook Research Project Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,7,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1 IT-NET 1	CSDF 9-12.DL.1
Weeks 12-13 Digital Citizenship and Ethical Computing	<ul style="list-style-type: none"> What does it mean to be a good digital citizen? What is the proper use of social media? How can technology be used ethically to avoid hurting others and oneself? 	<ul style="list-style-type: none"> Conduct themselves with professionalism while exchanging their ideas and interests over the internet or through social media. Describe what kinds of information are appropriate and inappropriate to share. Explain how use of the internet and social media can have a positive or negative impact. 	Written <ul style="list-style-type: none"> Workbook Research Project Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,7,8,9,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,4	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1 IT-NET 1	CSDF 9-12.IC.3,4,5 9-12.CY.1,2,3

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	<ul style="list-style-type: none"> How can information be verified as accurate and true? Should outdated technology equipment be recycled? 	<ul style="list-style-type: none"> Explain how outdated technology impacts our environment. 			
Week 14 How to Clean and Maintain Technology	<ul style="list-style-type: none"> What tools and procedures are used to clean and maintain equipment? What procedures can keep equipment, classmates, and oneself safe? What new products, technology or procedures evolved because of COVID? 	<ul style="list-style-type: none"> Explain the policies and procedures that encourage safe, long-term use of equipment. Properly disinfect key equipment in order to keep the classroom and building community safe. Identify where appropriate cleaning supplies are located within the classroom and explain how to use them safely. 	Written <ul style="list-style-type: none"> Workbook Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDF 9-12.NSD.2,3 9-12.DL.2,5
Weeks 15-16 Digital Portfolios, Resumes, and Work-Based Learning	<ul style="list-style-type: none"> What is a portfolio and why is it important to have one? What is a resume? What kinds of skills and experience are important to include on a resume? What is work-based learning and why is it important? 	<ul style="list-style-type: none"> Explain what a portfolio is, how to create one and its importance to a career plan. Describe the types of skills, projects, and information that should be documented in a portfolio. Explain what a resume is, how to create one and its importance to a career plan. Describe the types of skills, projects, and information that should be documented in a resume. Explain the importance of work-based learning experiences to creating effective portfolios and resumes. 	Written <ul style="list-style-type: none"> Workbook TestOut Assignments Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Lab Simulation of computer setup Set up a computer lab (manually) Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,8,10,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1	CSDF 9-12.IC.7 9-12.DL.1,2,5
Week 17 Safety in the Computer Lab Protecting Ourselves and Our Technology	<ul style="list-style-type: none"> What is electrostatic discharge? How can users and computer components be protected from electrostatic discharge? How is safety maintained at all times when dealing with computer hardware and peripherals? What does professionalism look like in the classroom and the workplace? 	<ul style="list-style-type: none"> Explain and demonstrate how to protect oneself and components from electrostatic discharge. Explain and demonstrate how to safely handle computer hardware and peripherals. Explain and demonstrate how to conduct oneself professionally in the classroom, lab room, and workplace. 	Written <ul style="list-style-type: none"> Workbook TestOut Assignments Self-Assessment Performance <ul style="list-style-type: none"> ESD lab Anti-static wrist wrap and mat assignment Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,3,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,4	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1	CSDF 9-12.NSD.2,3 9-12.DL.
Week 18			Written	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Introduction to the Computer Lab, Tools, and Resources	<ul style="list-style-type: none"> Where is the computer lab and when will it be used? What are the classroom procedures? How are computers, surge protectors, and uninterruptable power supplies maintained? What tools are used in the field of computer maintenance and repair and what are they used for? How are tools used safely to avoid damage to users and computer hardware? 	<ul style="list-style-type: none"> Describe the spaces that are used for teaching and learning and the procedures for sharing it. Explain the rules and expectations for using the lab. Explain how computers, surge protectors, and uninterruptable power supplies are maintained. Explain the tools that are used in the field of computer maintenance and repair and what are they used for. Demonstrate how to properly use and put away tools necessary to assemble and repair computers. Demonstrate how to use tools safely to avoid damage to users and computer hardware. 	<ul style="list-style-type: none"> Workbook TestOut Assignments Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 		9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1	CSDF 9-12.NSD.2,3 9-12.DL.2,4,5
Week 19 File Management, Storage and Backups	<ul style="list-style-type: none"> What is a drive and what are the different types? What are files and file extensions? What are the most important file types and what do they do? How is data transferred, shared, and backed up? How is data protected from loss, damage, or attack? How is data restored? 	<ul style="list-style-type: none"> Define and explain the function of different types of drives, including hard drives, network drives, cloud drives, internal and external drives, and thumb drives. Describe programs and methods for navigating drives, folders, and files on a computer. Explain the importance of folder creation in order to keep files organized and easy to find. Explain how data is transferred, shared, Explain how data is protected from loss, damage, or attack. Explain how data is restored. 	Written <ul style="list-style-type: none"> Workbook TestOut Assignments Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,5	CSDF 9-12.NSD.1,2,3 9-12.DL.1,2,4,5
Weeks 20-23 Introduction to Word Processing and Microsoft Word	<ul style="list-style-type: none"> What is word processing and what is it used for? How are documents edited for errors? What types of professional documents can be created? How are documents manipulated to improve the professional appearance? 	<ul style="list-style-type: none"> Explain the importance of word processing. Use of keyboarding skills to create word processing documents. Navigate, highlight, format and edit word processing documents. Use document templates to create commonly used text documents. Create resumes, memos, business letters, and other professional documents. 	Written <ul style="list-style-type: none"> Workbook TestOut Assignments Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDF 9-12.NSD.2 9-12.DL.1,2,4,5

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Weeks 24-25 Introduction to Presentation Software and Microsoft PowerPoint	<ul style="list-style-type: none"> What is a presentation and what is its purpose? What makes an effective presentation? What tools can be used to improve the appearance and effectiveness of a presentation? What can be done to deliver a presentation in a way that engages and informs the audience? 	<ul style="list-style-type: none"> Explain what a presentation is and what it is used for. Describe the qualities of an effective presentation. Explain how to deliver a presentation that will engage and inform people about the subject. 	Written <ul style="list-style-type: none"> Workbook TestOut Assignments Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDF 9-12.NSD.2 9-12.DL.1,2,4,5
Weeks 26-27 Introduction to Spreadsheets and Microsoft Excel	<ul style="list-style-type: none"> What is a spreadsheet and what is its purpose? What makes an effective spreadsheet? What tools can be used to share data and information from a spreadsheet? 	<ul style="list-style-type: none"> Describe what a spreadsheet is and what it can be used for. Explain the different parts of a spreadsheet. Create a spreadsheet and add data. Perform basic calculations using spreadsheet formulas. Sort and filter data. Create visual representations of spreadsheet data. Explain the relationship between spreadsheets and databases. 	Written <ul style="list-style-type: none"> Workbook TestOut Assignments Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDF 9-12.NSD.3 9-12.DL.1,2,4,5
Weeks 28-29 Introduction to Databases and Microsoft Access	<ul style="list-style-type: none"> What is a database and what is its purpose? What makes an effective database? What tools can be used to share data and information from a database? 	<ul style="list-style-type: none"> Describe what a database is and what it can be used for. Explain the different parts of a database. Create a database file. Use spreadsheets and forms to input, track and filter data. 	Written <ul style="list-style-type: none"> Workbook TestOut Assignments Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3 IT-PRG 10	CSDF 9-12.NSD.3 9-12.DL.1,2,4,5
Weeks 30-31 Introduction to Hardware	<ul style="list-style-type: none"> What is computer hardware? What are the key components that make-up a computer system? What is the responsibility or function of each component? 	<ul style="list-style-type: none"> Define computer hardware. Describe the key hardware components that make up a computer system. Explain the function of each component. 	Written <ul style="list-style-type: none"> Workbook TestOut Assignments Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards	CSDF

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
			<ul style="list-style-type: none"> • Procedure Checklist • Teacher Observation Checklist 	IT-SUP 1,2,3	9-12.NSD.2,3 9-12.DL.1,2,4,5
Week 32 Introduction to Software	<ul style="list-style-type: none"> • What is computer software? • What are the key categories of software used and what is each used for? • How is software delivered to users and how has this evolved? • What are the qualities of an effective program? • What is coding? 	<ul style="list-style-type: none"> • Define computer software. • Describe the key categories of computer software and explain the uses of each category. • Explain how computer software can be delivered and how these processes have evolved. • Describe the qualities of an effective program. • Explain the function of computer coding. • List and describe the basic components of different types of codes. 	Written <ul style="list-style-type: none"> • Workbook • TestOut Assignments • Tests and Quizzes • Self-Assessment • Professional Portfolio Performance <ul style="list-style-type: none"> • Class Presentation • Procedure Checklist • Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDf 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 33-34 Introduction to Networking and Wireless Computing	<ul style="list-style-type: none"> • What is the networking? • What is the history and evolution of networking? • How does a network function? 	<ul style="list-style-type: none"> • Explain what networking is. • Describe the history and evolution of networking. • Explain how a network functions. 	Written <ul style="list-style-type: none"> • Workbook • TestOut Assignments • Tests and Quizzes • Self-Assessment • Professional Portfolio Performance <ul style="list-style-type: none"> • Class Presentation • Procedure Checklist • Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,5 IT-NET 2	CSDf 9-12.NSD.2,4,5 9-12.DL.1,2,4,5
Weeks 35-36 Introduction to the Internet	<ul style="list-style-type: none"> • What is the internet? • What is the history and evolution of the internet? • How does the Internet function? 	<ul style="list-style-type: none"> • Explain what the internet is. • Describe the history and evolution of the internet. • Explain how the internet functions. 	Written <ul style="list-style-type: none"> • Workbook • TestOut Assignments • Tests and Quizzes • Self-Assessment • Professional Portfolio Performance <ul style="list-style-type: none"> • Class Presentation • Procedure Checklist • Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3 IT-NET 2	CSDf 9-12.NSD.2,4,5 9-12.DL.1,2,4,5
Week 37 Safe Use of the Internet, Social Media, and other Digital Tools	<ul style="list-style-type: none"> • How can the internet be dangerous? • What can users do to protect themselves? 	<ul style="list-style-type: none"> • Describe some possible dangers in using the internet. • Explain ways that internet users can protect themselves from possible online dangers. 	Written <ul style="list-style-type: none"> • Workbook • TestOut Assignments • Tests and Quizzes • Self-Assessment 	Career Ready Practices CRP 1,2,3,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards	Literacy

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	<ul style="list-style-type: none"> What are the pros and cons of social media? What can users do to avoid negative experiences with social media? What other digital tools are there and how can they be used in healthy ways? 	<ul style="list-style-type: none"> Describe the pros and cons of social media. Identify ways to avoid negative experiences with social media. List other digital tools and explain how they can be used in healthy ways. 	<ul style="list-style-type: none"> Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	IT 1,4,11,12 Pathway Standards IT-SUP 1,2,3 IT-NET 1,2	9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7 CSDf 9-12.IC.4 9-12.NSD.2,3,4,5 9-12.CY.1,2,3 9-12.DL.1,2,4,5
Week 38 The Evolution of Technology Careers, Technology Trends and What's to Come	<ul style="list-style-type: none"> How have technology careers evolved over time? What are different careers available in the technology field and what types of skills do they require? What are the current trends in technology careers? What will technology careers look like in the future? 	<ul style="list-style-type: none"> Describe how technology careers have evolved over time. List different careers available in the technology field and explain what types of skills they require. Research and describe current trends in technology careers. Predict what technology careers might look like in the future. 	Written <ul style="list-style-type: none"> Workbook TestOut Assignments Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,7,8,10,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,5,6	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1 IT-NET 1 IT-PRG 1	CSDf 9-12.IC.7 9-12.NSD.2,4 9-12.DL.1,2,4,5
Week 39 Finding and Applying for a Job	<ul style="list-style-type: none"> What resources can be used in a job search? How can a job candidate identify and apply for a position? 	<ul style="list-style-type: none"> Locate potential job openings using both face-to-face and digital methods. Use employment sites like Monster and Indeed. Fill out a formal application. 	Written <ul style="list-style-type: none"> Workbook Tests and Quizzes Self-Assessment Professional Portfolio Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,7,8,10,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1 IT-NET 1 IT-PRG 1	CSDf 9-12.IC.7 9-12.NSD.2,3 9-12.DL.1,2,4,5
Week 40 Review and Final Exam	<ul style="list-style-type: none"> Are you prepared for the Final Exam? 	<ul style="list-style-type: none"> Prepare and take the Final Exam. 	<ul style="list-style-type: none"> Final Exam 	Career Ready Practices CRP 1,2,3,4,7,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3 IT-NET 1,2 IT-PRG 1,10	CSDf 9-12.IC.1,3,4,7 9-12.NSD.1,2,3,4,5 9-12.CY.1,2,3 9-12.DL.1,2,4,5

Syracuse City School District
Career and Technical Education Program
Course Syllabus
CSS200: Cybersecurity 200



Program Overview

Cybersecurity is the study of information technology security and focuses on protecting computers, networks, programs, and data from unintended or unauthorized access, change, or destruction. The Cybersecurity Program is designed to help students explore the process of securing computers and computer networks, and conducting investigations of cybercrimes and forensic analysis of digital devices. Students will be equipped with the knowledge and skills to manage helpdesk functions in small to medium business IT operations as well as continue on to post-secondary training for careers in computer and network security, cybercrime investigation and computer forensics. Throughout the program, students gain mastery of these skills by performing simulated hands-on exercises. Students who successfully complete the program can earn up to nine college credits and obtain CompTIA A+ Certification, a fundamental accreditation for work in many IT fields.

Course Description

This course provides an overview and exploration of computer hardware and software, including memory, input/output devices, operating systems, and troubleshooting. Students will learn about the how the internet functions, as well as the uses and abuses of social media. Student will work with both wired and wireless networks and learn the basics of computer programming. Student will become familiar with the vulnerabilities in computer systems and learn about how to protect both devices and users from security threats. Students will also explore different career options within the computer science field to determine areas of personal interest. The course emphasizes practical hands-on labs and exercises that will be used by students to gain an understanding of software technologies that are relevant to computer science. By writing lab reports that document their findings and results, students will implement knowledge and skills in authentic situations.

Work-Based Learning

Students will be connected with working computer science professionals in the community through Career Coaching, field trips and job shadowing which could lead to further opportunities for direct job training and real-world experience. Students will create and maintain a portfolio of their work-based learning experiences throughout the program to document the development of their skills.

Pre-Requisites

N/A

Course Objectives

6. Students will understand the historical and societal context of computer systems.
7. Students will understand the career ready practices that will lead to success in the computer science pathway.
8. Students will understand both the hardware and software technology used in computer operations.
9. Students will assemble and troubleshoot computers.
10. Students will demonstrate basic programming and data analysis skills.
11. Students will recognize security threats and identify ways to protect both computer systems and users.

Integrated Academics

N/A

Concurrent Enrollment

Upon successful completion of Computer Science 200, students who earn a grade of B or higher will earn 3 college credits for CRJ 107 Computer Hardware and Peripherals from Utica College.

Equipment and Supplies

- **School will provide:** All necessary technology and classroom equipment
- **Student will provide:** N/A

Textbook

TBD

Grading

10%	Class Attendance and Participation
10%	Oral Presentation
25%	Assignments
25%	Mid-Term Exam
30%	Final Exam

Additional Course Policies

- Students are required to follow all safety procedures.
- All work is due at the time and day specified when the assignment is given. Submission details for work to be graded will be given at the time the work is assigned.
- Quizzes will be given throughout the semester. The lowest quiz score (one score only) will be dropped when calculating the final course grade.

Course Calendar

Quarter	Units of Study
1	<ul style="list-style-type: none">• Introduction to Course, Classroom Practices, and Expectations: Being Successful• Technology and Ethics• History of Computers and Their Use in Society• Digital Media: Digital Data and Media Formatting• Computer Hardware: Internal Components• Input And Output Devices and Peripherals
2	<ul style="list-style-type: none">• Storage and Devices• Hardware Troubleshooting• Operating Systems, System Software, BIOS/UEFI• File Management, Application Software, and Software Troubleshooting• Printing
3	<ul style="list-style-type: none">• The Internet and How It Works: Web Browsers, and Cloud Computing• Social Media, and Internet Communication Technologies• The Internet of Things and Internet Technology Careers• Networking Basics: Topologies, IP Addresses, and Networking Devices• Wired and Wireless Networking: Network/Ethernet Cables, Wireless Standards, and Creating a Home Network• Internet Connectivity, Networking Protocols, and Network Troubleshooting• Databases
4	<ul style="list-style-type: none">• Programming and Web Development• Data Analysis, Designing and Implementing Systems• Security Threats and Vulnerabilities• Authentication, Encryption, and Device Security• IT Career Preparation

Syracuse City School District
Career and Technical Education Program
Scope and Sequence
CSS200: Cybersecurity 200



Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Weeks 1-2 Introduction to Course, Classroom Practices, and Expectations: Being Successful	<ul style="list-style-type: none"> What do students wish to get out of this class? How can students be successful in this course? How can students manage their time? How can students appropriately and effectively use technology? 	<ul style="list-style-type: none"> Explain and follow classroom procedures. List and explain classroom rules and safety precautions and procedures. Use tools to effectively manage their time. Use computer hardware and software to participate in class. 	Written <ul style="list-style-type: none"> Assignments Self-Assessment Performance <ul style="list-style-type: none"> Class Presentation Procedure Checklist Teacher Observation Checklist 	Career Ready Practices CRP 1,2,4,8,11 Cluster Standards IT 1 Pathway Standards IT-SUP 1 IT-NET 1	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7 CSDF 9-12.IC.7 9-12.DL.2,5
Week 3 Technology and Ethics	<ul style="list-style-type: none"> What does ethics mean? How is ethics similar to or different from morals? How does one act ethically in the workplace? In school? How is technology used ethically? What uses of technology would be unethical? 	<ul style="list-style-type: none"> Define ethics. Differentiate between ethics and morals. Differentiate between appropriate behavior and inappropriate behavior in a business and school setting. 	Written <ul style="list-style-type: none"> Ethics in Technology Article Talking with the Text Assignment Journal Entry Performance <ul style="list-style-type: none"> Ethics Scenario Quiz 	Career Ready Practices CRP 1,2,3,4,8,11 Cluster Standards IT 1,4 Pathway Standards IT-SUP 1 IT-NET 1	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7 CSDF 9-12.IC.3,4,5
Week 4 History of Computers and Their Use in Society	<ul style="list-style-type: none"> What is a computer? What have computers been used for throughout history? How have computers and their use changed over time? 	<ul style="list-style-type: none"> Define computer. Explain the shift in use and reliance on computers and technology over time. Identify major turning points in history related to computers. 	<ul style="list-style-type: none"> Research/Presentation on Computers in Society Section Quiz 	Career Ready Practices CRP 1,2,5,7,8,11 Cluster Standards IT 1,6 Pathway Standards IT-SUP 1	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7 CSDF 9-12.IC.1,7
Weeks 5-6 Digital Media: Digital Data and Media Formatting	<ul style="list-style-type: none"> How do computers store data? How are numbers converted between binary and decimal systems? 	<ul style="list-style-type: none"> Describe how computers store data. Explain decimal, binary, octal, and hexadecimal number systems. Perform binary addition. Convert numbers from binary to decimal and decimal to binary forms. 	Assignments <ul style="list-style-type: none"> Binary Conversions Assignment MS Paint Exercise (Pixel Mapping) Performance <ul style="list-style-type: none"> Binary to Decimal Quiz Decimal to Binary Quiz 	Career Ready Practices CRP 1,2,4,8,11 Cluster Standards IT 1,11,12 Pathway Standards IT-SUP 1,2,3	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7 CSDF 9-12.NSD.2,3
Weeks 7-8	<ul style="list-style-type: none"> What are the essential internal components of a PC? 	<ul style="list-style-type: none"> Identify and describe all internal PC components. 	<ul style="list-style-type: none"> Explore A Motherboard Lab 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Computer Hardware: Internal Components	<ul style="list-style-type: none"> What are the internal components responsible for and how do they function? How do the internal components interface with each other? How are components installed into a desktop PC? 	<ul style="list-style-type: none"> Describe appearance and function of each internal PC component. Describe how each component interfaces with the rest of the PC (cables, slots on motherboard, socket, etc.). Install PC components into a PC case and onto a motherboard. 	<ul style="list-style-type: none"> Install Memory Lab Upgrade A Video Card Lab Performance <ul style="list-style-type: none"> Hardware Quiz 		9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDf 9-12.NSD.2,3
Weeks 9-10 Input And Output I/O) Devices and Peripherals	<ul style="list-style-type: none"> What is an input device? What is an output device? What types of devices are I/O devices? How do I/O devices interface with a PC? What are the main ports and cables that are used to connect PC peripherals? 	<ul style="list-style-type: none"> Define input devices vs. output devices. Identify common I/O devices and peripherals. Describe ports, connectors, and cables used to connect I/O devices and peripherals. 	Labs <ul style="list-style-type: none"> Connect a Monitor Lab Set Up a Computer Lab Performance <ul style="list-style-type: none"> I/O Quiz 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDf 9-12.NSD.2,3 9-12.DL.1,2,4,5
Week 11-12 Storage and Devices	<ul style="list-style-type: none"> What is the difference between memory and storage? What types of storage devices exist? How do different types of storage devices function to hold data? What is a file system? How is information organized on a storage device? 	<ul style="list-style-type: none"> Compare and contrast the features of different external storage devices, including hard disk drives, optical drives, flash storage, and solid-state drives. Describe common file system features, including compression, encryption, permissions, journaling, and file naming rules. Describe disk partitioning and formatting methods. 	Labs <ul style="list-style-type: none"> Install SATA Devices Lab Create Volumes Lab Format Drives Lab Perform Disk Management Lab Performance <ul style="list-style-type: none"> Storage Quiz 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDf 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 13-14 Hardware Troubleshooting	<ul style="list-style-type: none"> How does a malfunction in one part of the computer affect the rest of the system? What is the most effective way to troubleshoot a problem? Why is it important to troubleshoot a problem before implementing a potential solution? 	<ul style="list-style-type: none"> Identify the proper sequence of steps to follow in the troubleshooting methodology. Diagnose and resolve common motherboard problems. Diagnose and resolve common computer memory problems. Diagnose and resolve common processor problems. 	Labs <ul style="list-style-type: none"> Troubleshoot System Power Lab Troubleshoot Memory Lab Troubleshoot Processor Installation Lab Troubleshoot SATA Devices Lab Performance <ul style="list-style-type: none"> Troubleshooting Quiz 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDf 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 15-16	<ul style="list-style-type: none"> What is an operating system? 	<ul style="list-style-type: none"> Identify common operating systems, including systems designed for mobile devices. 	Labs <ul style="list-style-type: none"> Explore Windows 10 Lab 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Operating Systems, System Software, BIOS/UEFI	<ul style="list-style-type: none"> How does the operating system coordinate the work of hardware and software? What are the similarities and differences between mobile and desktop operating systems? 	<ul style="list-style-type: none"> Describe the basic functions of different types of operating systems. Identify and describe components of the Windows 10 operating system. 	<ul style="list-style-type: none"> Change Windows Settings Lab Explore iOS Lab Operating System History Presentation 		9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,4	CSDf 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 17-18 File Management, Application Software, and Software Troubleshooting	<ul style="list-style-type: none"> What is a file system? How does a file system organize files? What is the relationship between files and directories? What file systems do each operating system use and how are they different? What are user permissions and what do they allow an administrator to do? 	<ul style="list-style-type: none"> Compare and contrast the features of various file systems. Create folders in the Windows file system. Copy, rename, and delete files in Windows. Manage files using the command line and graphical user interface. 	Labs <ul style="list-style-type: none"> Manage Files and Folders Lab Assign File Permissions Lab Copy Files from USB Lab Configure NTFS Permissions Lab Use Windows Powershell Commands Lab 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,1,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,4	CSDf 9-12.NSD.2,3 9-12.DL.1,2,4,5
Week 19 Printing	<ul style="list-style-type: none"> What are some common types of printers? What are the benefits and drawbacks of inkjet printers and laser printers? What is a 3D printer and what can they be used for? 	<ul style="list-style-type: none"> Describe different types of printers commonly in use. Compare and contrast inkjet and laser printers Describe 3D printers and their uses. Print a document. Install device drivers for a printer. Connect to a shared printer in Windows. 	<ul style="list-style-type: none"> Printer Type Presentation Install and Configure a Local Printer Lab Print a Document Lab 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDf 9-12.NSD.2,3 9-12.DL.1,2,4,5
Week 20 The Internet and How It Works: Web Browsers, and Cloud Computing	<ul style="list-style-type: none"> What are the similarities and differences between the internet and the world wide web? How have the internet and the web impacted our lives? 	<ul style="list-style-type: none"> Compare and contrast the internet and the world wide web. Describe the essential components of the web (URLS, hyperlinks, web browsers, etc.). Compare and contrast desktop applications and web applications. 	<ul style="list-style-type: none"> Clear Browser Cache Lab Configure Browser Settings Lab Use a Proxy Server Lab Internet/IoT Quiz 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3 IT-NET 1,2	CSDf 9-12.NSD.2,3,4,5 9-12.DL.1,2,4,5
Week 21 Social Media, and Internet Communication Technologies	<ul style="list-style-type: none"> What is social media? How has social media helped and hurt society? 	<ul style="list-style-type: none"> Define social media and describe what it is used for. Describe the risks involved with using social media. 	<ul style="list-style-type: none"> Digital Citizenship Assignment Article and TWTT Digital Citizenship Presentation 	Career Ready Practices CRP 1,2,3,4,5,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards	Literacy

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	<ul style="list-style-type: none"> How can social media be used as a way to reach personal goals? Why should users be careful about what they post online? 	<ul style="list-style-type: none"> Define what it means to be a good digital citizen. 	<ul style="list-style-type: none"> Social Media Investigation Lab 	IT 1,4,11,12 Pathway Standards IT-SUP 1,2,3 IT-NET 1,2	9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7 CSDF 9-12.NSD.2,3,4,5 9-12.CY.1,2 9-12.DL.1,2,4,5,6,7
Week 22 The Internet of Things and Internet Technology Careers	<ul style="list-style-type: none"> What is the Internet of Things? What kinds of devices connect to the internet? What is a smart device and how do these devices interact with a network? What new careers will the Internet of Things create? 	<ul style="list-style-type: none"> Define Internet of Things. Describe IoT devices and their use cases. Explain why more and more devices are connected. Brainstorm the possibilities and new careers that will result from the evolution of IoT. 	<ul style="list-style-type: none"> Configure Smart Devices Lab IoT Careers Brainstorm/ Research Paper 	Career Ready Practices CRP 1,2,4,5,7,8,10,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,6,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,5 IT-NET 1,2	CSDF 9-12.IC.7 9-12.NSD.2,3,4,5 9-12.DL.1,2,4,5
Weeks 23-24 Networking Basics: Topologies, IP Addresses, and Networking Devices	<ul style="list-style-type: none"> What is networking? What devices, interfaces, and protocols exist in networking? How does information travel over a network? What is an IP address? 	<ul style="list-style-type: none"> Explain difference between a LAN and a WAN. Describe network topologies and their advantages and disadvantages. Describe standard devices and interfaces used in wired and wireless networking. Describe the purposes of network interface cards, routers, switches, and hubs. 	<ul style="list-style-type: none"> Install a Network Adapter Lab Set Up an Ethernet Connection Lab Network Topology Quiz 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,5 IT-NET 1,2	CSDF 9-12.NSD.2,3,4,5 9-12.DL.1,2,4,5
Weeks 25-26 Wired and Wireless Networking: Network/Ethernet Cables, Wireless Standards, and Creating a Home Network	<ul style="list-style-type: none"> What are the advantages and disadvantages of wireless vs. wired networks? What's the difference between wi-fi and Bluetooth? What is an RJ45 cable and how is one made? What is a wireless access point? How are resources shared over a network? 	<ul style="list-style-type: none"> Describe different types of networking cables (twisted pair, coaxial, fiber optic). Create an Ethernet/RJ45 cable. Compare public wi-fi networks with secure wireless networks. Connect to a public wi-fi network. Connect to a secure wireless network. Share a printer over a network. 	<ul style="list-style-type: none"> Use a Wireless Network Lab Configure Network Printing/Share a Printer Lab Create a Home Wireless Network Lab (Configure a Wireless Router) 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,5 IT-NET 1,2	CSDF 9-12.NSD.2,3,4,5 9-12.DL.1,2,4,5
Weeks 27-28 Internet Connectivity, Networking Protocols, and	<ul style="list-style-type: none"> What is an ISP? What is a VPN? How is data secured over a network? What is TCP? 	<ul style="list-style-type: none"> Describe the relationship between ISPs and the Internet. Define VPN and explain what it does and how it protects transfer of data. 	<ul style="list-style-type: none"> Connect a Cable Modem Lab Configure a Wireless Network Lab 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Network Troubleshooting	<ul style="list-style-type: none"> What is UDP? Why is it important for computers and networks to use protocols? 	<ul style="list-style-type: none"> Describe secure shell connections and encrypted traffic. Define Transmission Control Protocol and User Datagram Protocol. 	<ul style="list-style-type: none"> Configure a VPN Connection Lab 		9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,5 IT-NET 1,2	CSDf 9-12.NSD.2,3,4,5 9-12.DL.1,2,4,5
Week 29-30 Databases	<ul style="list-style-type: none"> What is a database? How are databases used in everyday life? What's the difference between a database and a spreadsheet? 	<ul style="list-style-type: none"> Describe use cases of databases. Explain how databases are more complex than spreadsheets. Use Microsoft Access to explore database components. 	<ul style="list-style-type: none"> Explore an Access Database Lab Create Queries in a Database Lab Tables and Relationships Lab Intro to Databases Quiz 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3 IT-PRG 1,10	CSDf 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 31-33 Programming and Web Development	<ul style="list-style-type: none"> What is computer programming? How is computer programming related to computer hardware? What is a compiled language? What is an interpreted language? What are HTML, CSS, and JavaScript? 	<ul style="list-style-type: none"> Explain what computer programming is and what it is used for. Describe the difference between programming and scripting. Compare and contrast programming languages (interpreted vs. compiled vs. query). 	<ul style="list-style-type: none"> JS Code Labs 1-4 JavaScript Labs 1-4 Basic HTML Website Design Assignment Programming Logic Quiz 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3 IT-NET 1,2 IT-PRG 1,2,3,4	CSDf 9-12.CT.6 9-12.NSD.2,3,4,5 9-12.DL.1,2,4,5
Week 34-35 Data Analysis, Designing and Implementing Systems	<ul style="list-style-type: none"> Why do businesses use data to make decisions? How do spreadsheets, tables, charts, graphs make it easier to interpret data? 	<ul style="list-style-type: none"> Describe the steps involved in data analytics. Format data in an Excel spreadsheet. Analyze data in an Excel spreadsheet. Analyze data in Microsoft Access. 	<ul style="list-style-type: none"> Excel Tables Lab Excel Charts Analysis Lab Microsoft Access Reports/Data Analysis Lab 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3 IT-NET 1,2 IT-PRG 1,3,4,5	CSDf 9-12.CT.2,3 9-12.NSD.2,3 9-12.DL.1,2,4,5
Week 36 Security Threats and Vulnerabilities	<ul style="list-style-type: none"> Why is securing a computer/computer network important? What can a hacker/attacker do with access to someone's private information? How can users protect themselves online? 	<ul style="list-style-type: none"> Describe the components of the CIA triad. Describe the most common threats to confidentiality, integrity, and availability. Define social engineering and describe social engineering tactics used by bad actors. 	<ul style="list-style-type: none"> Recognize Social Engineering Exploits Lab 1 and 2 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,8,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,5	CSDf 9-12.NSD.2,3,4,5

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
				IT-NET 1,2,5 IT-PRG 1,3,4	9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5
Week 37-38 Authentication, Encryption, and Device Security	<ul style="list-style-type: none"> What do authentication, authorization, and accounting mean and how do they work together to secure a computer? How can users make their passwords secure? What is two-factor authentication and why is it important? What is encryption? 	<ul style="list-style-type: none"> Describe common forms of authentication and their purpose. Explain multifactor authentication. Secure a device using a user account and access control management software. Define encryption and explain how it secures data. 	<ul style="list-style-type: none"> Create a User Account Lab Configure Access Control and Authentication Lab Encrypt A File/Encrypt A Drive on Windows Lab 	Career Ready Practices CRP 1,2,4,8,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,8,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3 IT-NET 1,2,5 IT-PRG 1,3,4	CSDF 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5
Weeks 39-40 IT Career Preparation	<ul style="list-style-type: none"> How has this course prepared students for a career in IT? What skills and education are required for careers in this area? How can students continue to prepare for a career in these fields? 	<ul style="list-style-type: none"> Describe various career paths in the field of IT. Identify growing areas within IT and future outlook for jobs. Research and identify college programs that prepare students for IT careers. 	<ul style="list-style-type: none"> College and Career Research Project Course Reflection Paper 	Career Ready Practices CRP 1,2,3,4,7,8,10,11	ELA 9-10R 1,2,4,7,8,9 9-10W 2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards IT 1,4,6,8,11,12	Literacy 9-10RST 1,2,4,7,8,9 9-10WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,5 IT-NET 1,2,5 IT-PRG 1,3,4	CSDF 9-12.IC.1,2,3,4,5,7 9-12.CT.6 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5

Syracuse City School District
Career and Technical Education Program
Course Syllabus
CSS300: Cybersecurity 300



Program Overview

Cybersecurity is the study of information technology security and focuses on protecting computers, networks, programs, and data from unintended or unauthorized access, change, or destruction. The Cybersecurity Program is designed to help students explore the process of securing computers and computer networks, and conducting investigations of cybercrimes and forensic analysis of digital devices. Students will be equipped with the knowledge and skills to manage helpdesk functions in small to medium business IT operations as well as continue on to post-secondary training for careers in computer and network security, cybercrime investigation and computer forensics. Throughout the program, students gain mastery of these skills by performing simulated hands-on exercises. Students who successfully complete the program can earn up to nine college credits and obtain CompTIA A+ Certification, a fundamental accreditation for work in many IT fields.

Course Description

In this course, students will continue to build on their knowledge of computers, equipment, operating systems, file management, and computer storage. Students will learn to install, maintain, and troubleshoot both external and internal computer components and equipment, and will explore networking options with printers, laptops, and mobile devices. Students will learn the basics of the Windows operating system including installation, system management, troubleshooting, backup, and recovery. Students will research different career options within the computer science field to determine areas of personal interest. The course emphasizes practical hands-on labs and exercises that will be used by students to gain an understanding of hardware and software technologies that are relevant to computer science. By writing lab reports that document their findings and results, students will implement knowledge and skills in authentic situations.

Work-Based Learning

Students will be connected with working computer science professionals in the community through Career Coaching, field trips and job shadowing which could lead to further opportunities for direct job training and real-world experience. Students will create and maintain a portfolio of their work-based learning experiences throughout the program to document the development of their skills.

Pre-Requisites

N/A

Course Objectives

12. Students will understand the career ready practices that will lead to success in the computer science pathway.
13. Students will understand both the hardware and software technology used in computer operations.
14. Students will assemble, maintain, and troubleshoot computers.
15. Students will demonstrate basic file management and networking skills.
16. Students will demonstrate use, maintain, and troubleshoot printers, laptops, and mobile devices.
17. Students will install and troubleshoot the Windows operating system, including backup and recovery.

Integrated Academics

N/A

Equipment and Supplies

- **School will provide:** All necessary technology and classroom equipment
- **Student will provide:** N/A

Textbook

TBD

Grading

- | | |
|-----|------------------------------------|
| 10% | Class Attendance and Participation |
| 10% | Oral Presentation |

25%	Assignments
25%	Mid-Term Exam
30%	Final Exam

Additional Course Policies

- Students are required to follow all safety procedures.
- All work is due at the time and day specified when the assignment is given. Submission details for work to be graded will be given at the time the work is assigned.
- Quizzes will be given throughout the semester. The lowest quiz score (one score only) will be dropped when calculating the final course grade.

Course Calendar

Quarter	Units of Study
1	<ul style="list-style-type: none"> • Classroom Practices: Being Successful • Computer/IT Specialist: Roles and Responsibilities • Computer Basics: Hardware, Software, and Operating Systems • Safety, Protection, and Professionalism • PC Toolkit and Maintenance
2	<ul style="list-style-type: none"> • Internal PC Hardware and Computer Form Factors • External PC Components and Peripherals • Storage Devices • File Systems: Creation, Storage Management, Disk Optimization, Storage Troubleshooting
3	<ul style="list-style-type: none"> • Introduction to Networking • Printers, Printer Configuration, and Network Printing • Printer Maintenance and Troubleshooting • Laptops: Components, Power Management, and Troubleshooting • Mobile Devices: Networking, Security, and Troubleshooting
4	<ul style="list-style-type: none"> • Windows Pre-Installation, Installation, and Post Installation • File Management • Windows System Tools • System Management and Active Directory • Windows Backup and System Recovery • Operating System Troubleshooting • Review and Final Exam

Syracuse City School District
Career and Technical Education Program
Scope and Sequence
CSS300: Cybersecurity 300



Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Weeks 1-2 Classroom Practices: Being Successful Computer/IT Specialist: Roles and Responsibilities	<ul style="list-style-type: none"> What are the expectations for the classroom and hands-on computer lab? How can students be successful in this class? What strategies can students use to manage their time? How can students use technology appropriately and effectively? What strategies can students use to study effectively to prepare for tests? What are the essential roles and responsibilities of a computer specialist? 	<ul style="list-style-type: none"> Explain and follow classroom procedures. List and follow rules for general classroom safety. Evaluate ways to manage time. Investigate various study skills for test taking and identify two effective skills. Describe the roles and responsibilities a Computer/IT Specialist has in a professional workplace. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Career Exploration Research Project Written Objective Quiz Self-Assessment Performance <ul style="list-style-type: none"> Procedure Checklist Mock Lab Procedure Practical 	Career Ready Practices CRP 1,2,4,7,8,10,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,3	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1 IT-NET 1 IT-PRG 1	CSDf 9-12.IC1,7
Weeks 3-4 Computer Basics: Hardware, Software, and Operating Systems	<ul style="list-style-type: none"> What hardware components are required for a computer to function? What hardware components are optional? How do components interface with one another? What is the purpose of an operating system (OS)? What are an operating system's core functions? 	<ul style="list-style-type: none"> Describe the core components of a desktop or laptop PC. Explain what each computer component is responsible for. Set up a computer. Navigate a Windows 10 graphical user interface (GUI). 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Self-Assessment Performance <ul style="list-style-type: none"> Simulation of Computer Setup Lab Set Up a Computer Lab (Manually) 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,4	CSDf 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 5-6 Safety, Protection, and Professionalism	<ul style="list-style-type: none"> What is electrostatic discharge (ESD)? How are users and computer components protected from electrostatic discharge? 	<ul style="list-style-type: none"> Explain what electrostatic discharge is and the effects it can have on computer equipment and computer users. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Anti-Static Wrist Wrap and Mat Assignment Self-Assessment 	Career Ready Practices CRP 1,2,3,4,8,10,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 11-12RST 1,2,4,7,8,9

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	<ul style="list-style-type: none"> How is safety maintained at all times when dealing with electricity or tools? What does professional behavior look like in the classroom and workplace? 	<ul style="list-style-type: none"> Explain and demonstrate how to protect oneself and components from ESD. Explain and demonstrate how to safely handle PC hardware and peripherals. Explain and demonstrate how to conduct oneself professionally in a classroom, lab room, workplace. 	Performance <ul style="list-style-type: none"> ESD Lab 	Pathway Standards IT-SUP 1 IT-NET 1 IT-PRG 1	11-12WHST 2,5,6,7 CSDF 9-12.IC.3,4,5 9-12.NSD.2,3 9-12.DL.1,2,4,5,6,7
Weeks 7-8 PC Toolkit and Maintenance	<ul style="list-style-type: none"> What tools are used in the field of PC maintenance and repair? What is each tool used for? How are PC surge protectors and uninterruptable power supplies maintained? How are tools used appropriately and safely that will not cause damage to PC hardware? 	<ul style="list-style-type: none"> Explain an uninterruptable power supply and how is one set up. Explain and demonstrate how to use a surge protector to prevent electrical surges from damaging components. Demonstrate appropriate and safe use of tools in disassembling, assembling, and repairing PCs and components. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments PC Tools Quiz Self-Assessment Performance <ul style="list-style-type: none"> Labs: PC Tools Practical Application, Install a UPS 	Career Ready Practices CRP 1,2,4,8,11 Cluster Standards IT 1,11,12 Pathway Standards IT-SUP 1,2,3	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7 CSDF 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 9-13 Internal PC Hardware and Computer Form Factors	<ul style="list-style-type: none"> What are the essential components in a PC and what are their functions? How are internal components installed in a PC? How do internal components interface with one another? 	<ul style="list-style-type: none"> Define and describe the functions of internal PC components. Differentiate between components, their installation method, interface method, and functionality. Determine the compatibility of computer components with another PC. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Unit Quiz Self-Assessment Performance <ul style="list-style-type: none"> Labs: Install Power Supply, Choose and Install Motherboard, Select and Install Processor 1 & 2, Install Triple Channel Memory 	Career Ready Practices CRP 1,2,4,8,11 Cluster Standards IT 1,11,12 Pathway Standards IT-SUP 1,2,3	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7 CSDF 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 14-15 External PC Components and Peripherals	<ul style="list-style-type: none"> What is a PC peripheral? What interfaces and ports allow external components to connect to a PC? What are the different versions and form factors of USB? 	<ul style="list-style-type: none"> Explain and demonstrate how to connect and configure peripheral devices. Differentiate between USB versions and form factors as well as their advantages and disadvantages. Explain and demonstrate how to connect and configure external components to be used with a PC. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Unit Quiz Self-Assessment Performance <ul style="list-style-type: none"> Labs: Connect a KVM Switch, Install USB Devices, Select and 	Career Ready Practices CRP 1,2,4,8,11 Cluster Standards IT 1,11,12 Pathway Standards IT-SUP 1,2,3	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7 CSDF 9-12.NSD.2,3 9-12.DL.1,2,4,5

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
			Install Dual Displays, Manage Devices		
Weeks 16-18 Storage Devices	<ul style="list-style-type: none"> How does a computer store information? What types of storage devices allow for permanent storage of data on a PC? What is the difference between SATA and IDE? What is the difference between an HDD and an SSD? What is the difference between flash storage and magnetic storage? What is a RAID array? What is a partition and how is it configured? 	<ul style="list-style-type: none"> Explain different ways that a computer can store information. Compare and contrast SATA and IDE. Compare and contrast an HDD and an SSD. Compare and contrast flash storage and magnetic storage. Explain and demonstrate how to install a hard drive. Explain and demonstrate how to install an SSD. Differentiate between logical and physical volumes. Explain and demonstrate how to create a RAID array. Explain and demonstrate how to create partitions on a hard drive. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments GPT Partitioning Questions Unit Quiz Self-Assessment Performance <ul style="list-style-type: none"> Labs: Install SATA Devices, Create RAID Arrays, Implement a Raid Solution, Format Drives 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDF 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 19-20 File Systems: Creation, Storage Management, Disk Optimization, Storage Troubleshooting	<ul style="list-style-type: none"> What is a file system? What file system is most popular on current Windows PC, Mac, and Linux computers? What is the Master Boot Record (MBR)? 	<ul style="list-style-type: none"> Create an MBR partition. Explain the difference between FAT32 and NTFS file systems. Create new volumes with command prompt and disk management software. Explain and demonstrate how to shrink or extend disk partitions. Explain and demonstrate how to perform disk management. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Unit Quiz Self-Assessment Performance <ul style="list-style-type: none"> Labs: Format Drives, Add Space to Existing Volumes, Implement Storage Spaces, Perform Disk Management 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDF 9-12.NSD.2,3 9-12.DL.1,2,4,5
Week 21-24 Introduction to Networking	<ul style="list-style-type: none"> What are network topologies and how do they operate? What network infrastructure devices exist? What is the OSI model? How are IP addresses created, classed and/or assigned? What is a subnet mask? What is a wireless network? 	<ul style="list-style-type: none"> Explain the differences between network topologies and how data is transferred between devices. Define the 7 layers of the OSI model. Explain IP address classes and how to differentiate between network and host portion of IP address. Explain default subnet mask vs. CIDR address. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Topology Facts Questions Assignment TCP/IP Protocol Assignment Unit Quiz Self-Assessment Performance <ul style="list-style-type: none"> Labs: Select and Install Network Adapter, 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,5 IT-NET 1,2	CSDF 9-12.NSD.2,3,4,5 9-12.DL.1,2,4,5

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
		<ul style="list-style-type: none"> Explain how wireless networking and wireless networking devices work. 	Configure TCP/IP Settings, Configure Internet Connection <ul style="list-style-type: none"> Windows Command Prompt Networking Commands Practical Assignment 		
Week 25 Printers, Printer Configuration, and Network Printing	<ul style="list-style-type: none"> What printer types exist? What is the way to select the best printer for a specific task? How is a printer connected and configured? 	<ul style="list-style-type: none"> Explain the difference between an inkjet and laser printer. List and explain the seven steps to the laser print process. Explain and demonstrate how to configure a printer. Explain and demonstrate how to find and install printer driver software. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Unit Quiz Self-Assessment Performance <ul style="list-style-type: none"> Labs: Choose a Printer, Select and Install a Printer, Configure Network Printing 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,5 IT-NET 1,2	CSDF 9-12.NSD.2,3 9-12.DL.1,2,4,5
Week 26 Printer Maintenance and Troubleshooting	<ul style="list-style-type: none"> What is the process for maintaining and troubleshooting a laser printer? What is the process for maintaining and troubleshooting an inkjet printer? 	<ul style="list-style-type: none"> Explain and demonstrate how to perform preventative maintenance on a laser printer. Explain and demonstrate how to change a toner cartridge and refill paper in a laser printer. Explain and demonstrate how to change ink cartridges and align inkjet printer. Explain and demonstrate how to stop and restart the print spooler. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Printer Troubleshooting Quiz Self-Assessment Performance <ul style="list-style-type: none"> Labs: Maintain Laser Printers, Maintain Inkjet Printers 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDF 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 27-28 Laptops: Components, Power Management, and Troubleshooting	<ul style="list-style-type: none"> What benefits does a laptop have over a desktop PC? What are external facing laptop ports and their functions? What components on a laptop are modular and how are components repaired or replaced? How is laptop power managed? 	<ul style="list-style-type: none"> Determine external ports available on laptop. Describe functionality of laptop ports. Disassemble a laptop. Repair laptop keyboard, lcd, and upgrade RAM. Configure laptop power management features. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Self-Assessment Performance <ul style="list-style-type: none"> Laptop Special Keys Practical Assignment Labs: Install Laptop Memory, Replace Laptop Keyboard, Replace Laptop LCD, Create a Power Plan 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDF 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 29-30	<ul style="list-style-type: none"> What components are unique to mobile devices 	<ul style="list-style-type: none"> Define and describe hardware components of mobile device (GPS, Bluetooth radio, cellular radio). 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Mobile Devices: Networking, Security, and Troubleshooting	<ul style="list-style-type: none"> and what are their functions? What is an IMEI (international mobile equipment identity) number? What is an IMSI (international mobile subscriber identity) number? What operating systems do mobile devices run on and how are they similar to and different from their desktop counterparts? What is 3G, 4G, LTE, 5G? 	<ul style="list-style-type: none"> Secure a mobile device. Setup and configure iOS and Android OS devices. 	<ul style="list-style-type: none"> Unit Quiz Mobile Device Troubleshooting Questions Self-Assessment Performance Labs: Manage Mobile Devices, Secure Mobile Devices, Configure iPad Access Control and Authentication 		11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3	CSDF 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 31 Windows Pre-Installation, Installation, and Post Installation	<ul style="list-style-type: none"> What are the different versions of Windows? How is Windows installed on a new computer? How is a Windows license activated? How is system compatibility verified? 	<ul style="list-style-type: none"> Determine OS compatibility with hardware. Install Windows on a new computer. Prepare disk for Windows installation or reinstallation. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Pre-Installation Planning Exercise Self-Assessment Performance <ul style="list-style-type: none"> Verify System Compatibility Assignment Labs: Prepare Disks for Installation, Install Windows 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,4	CSDF 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 32-33 File Management	<ul style="list-style-type: none"> What are Windows file and folder properties? What are file attributes? How are files managed from the graphical user interface (GUI)? How are files managed from the command prompt (CMD)? 	<ul style="list-style-type: none"> Define and differentiate between file types and extensions. Explain and demonstrate how to view and manipulate file extensions and file attributes. Manage directories from GUI and CMD. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Self-Assessment Performance <ul style="list-style-type: none"> Labs: Manage Files (GUI), Manage Files and Folders (CMD) 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,4	CSDF 9-12.CT.6,7 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 34 Windows System Tools	<ul style="list-style-type: none"> What is the Windows Task Manager? What is the control panel? What is Regedit? 	<ul style="list-style-type: none"> Use task manager to monitor and adjust system resources. Use control panel to adjust software settings of OS. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Self-Assessment Performance	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards	Literacy

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	<ul style="list-style-type: none"> How are system commands used to manipulate the operating system and file system? 	<ul style="list-style-type: none"> Use Regedit to make alterations to specific functions in Windows. Use system commands to manage resources and domain properties. 	<ul style="list-style-type: none"> Labs: Task Manager, Use System Commands Regedit Exercise 	IT 1,11,12 Pathway Standards IT-SUP 1,2,3,4	11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7 CSDf 9-12.CT.6,7 9-12.NSD.2,3 9-12.DL.1,2,4,5
Week 35 System Management and Active Directory	<ul style="list-style-type: none"> What is Active Directory? What is the process to join a domain? What are user accounts? What are organizational units? 	<ul style="list-style-type: none"> Manage Active Directory domains and accounts. Use remote desktop to troubleshoot and assist users. Create and delete organization units. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Self-Assessment Performance <ul style="list-style-type: none"> Labs: Manage Users and Groups, Create User Accounts, Create and Delete OUs, Configure Remote Services 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,4	CSDf 9-12.CT.6,7 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 36-37 Windows Backup and System Recovery	<ul style="list-style-type: none"> How are files backed up on Windows? How is a complete backup of the OS created? How are files backed up on a Mac? 	<ul style="list-style-type: none"> Create a Windows backup. Create a file history backup. Create a Mac backup using Time Machine. Use restore points to restore Windows to a prior state. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Self-Assessment Performance <ul style="list-style-type: none"> Lab: Back Up a Windows Computer, Configure File History, Create a Time Machine Backup, Create A Restore Point 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,7,11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,4	CSDf 9-12.CT.6,7 9-12.NSD.2,3 9-12.DL.1,2,4,5
Weeks 38-39 Operating System Troubleshooting	<ul style="list-style-type: none"> What is Windows "Automatic Repair" and why might Windows boot into it? What is the process to troubleshoot a Windows PC that is booting into automatic repair repeatedly? What is the process to troubleshoot a Windows PC that won't boot? 	<ul style="list-style-type: none"> Explain and demonstrate how to determine what a Windows error code means and resolve the issue. Explain and demonstrate how to configure the boot order. Explain and demonstrate how to troubleshoot issues at system startup. 	Written <ul style="list-style-type: none"> Workbook/TestOut Assignments Self-Assessment Performance <ul style="list-style-type: none"> Labs: Troubleshoot System Startup, Use Advanced Boot Options 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,7,11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,4	CSDf 9-12.CT.6,7 9-12.NSD.2,3 9-12.DL.1,2,4,5
Week 40 Review and Final Exam	<ul style="list-style-type: none"> What were the learning goals this year? What are the roles and responsibilities of an 	<ul style="list-style-type: none"> Complete assessment demonstrating a thorough knowledge of the technical concepts covered throughout the course. 	<ul style="list-style-type: none"> Final Assessment 	Career Ready Practices CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1,4,6,7,8,11,12	Literacy 11-12RST 1,2,4,7,8,9

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
	individual who works as a computer specialist?				11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,4,5 IT-NET 1,2	CSDF 9-12.IC.1,3,4,5,7 9-12.CT.6,7 9-12.NSD.2,3,4,5 9-12.CY.1,2,3 9-12.DL.1,2,4,5

Syracuse City School District
Career and Technical Education Program
Course Syllabus
CSS400: Cybersecurity 400



Program Overview

Cybersecurity is the study of information technology security and focuses on protecting computers, networks, programs, and data from unintended or unauthorized access, change, or destruction. The Cybersecurity Program is designed to help students explore the process of securing computers and computer networks, and conducting investigations of cybercrimes and forensic analysis of digital devices. Students will be equipped with the knowledge and skills to manage helpdesk functions in small to medium business IT operations as well as continue on to post-secondary training for careers in computer and network security, cybercrime investigation and computer forensics. Throughout the program, students gain mastery of these skills by performing simulated hands-on exercises. Students who successfully complete the program can earn up to nine college credits and obtain CompTIA A+ Certification, a fundamental accreditation for work in many IT fields.

Course Description

This course presents the student with foundational concepts and processes to achieve better information security in a modern organization. The student will develop an appreciation for the threat and risk of information exposure, as well as risk management and mitigation techniques to limit losses. Students will explore the essential elements of an information security policy and the importance of incident response, reporting, and containment in the context of timely restoration of information. Students will also learn procedures for notification of appropriate authorities leading to potential prosecution. Modern information security technologies and their limitations will be explored as well as legal, ethical, and privacy issues.

Work-Based Learning

Students will be connected with working computer science professionals in the community through Career Coaching, field trips and job shadowing which could lead to further opportunities for direct job training and real-world experience. Students will create and maintain a portfolio of their work-based learning experiences throughout the program to document the development of their skills.

Pre-Requisites

N/A

Course Objectives

1. Explain the role of information and the need for security in a modern organization.
2. Identify general classes of security threats and vulnerabilities in an organization.
3. Understand how to create and critically evaluate an information security policy to ensure that critical functions are sustainable while addressing the greatest information security risks.
4. Apply the security management process to mitigate threats of information disclosure for core processes.
5. Explain the fundamentals behind currently-employed computer security technologies.
6. Describe the legal, ethical, and privacy-related issues pertaining to information security.
7. Develop an incident response and recovery plan for first responders as well as an entire organization.
8. Realize that there is no such thing as perfect security.

Integrated Academics

1 CTE Integrated ELA Credit

Equipment and Supplies

- **School will provide:** All necessary technology and classroom equipment
- **Student will provide:** Outside access to the Internet, preferably broadband hi-speed, to complete readings, assignments, and communicate with the teacher and other students.

Textbook

TBD

Grading

Quizzes	30%
Labs	20%

Classroom Participation Assignments	10%
Final Project and Presentation	20%
Final Exam	20%

Additional Course Policies

- Quizzes will consist of T/F, multiple choice, fill-in-the-blank, and short essay questions.
- Labs will be assigned to address topics related to information security and cybersecurity. Labs will typically consist of hands-on assignments completed in groups. The output of each lab will be a 2 to 3-page lab report, consisting of an introduction section, a results section, and a conclusion. The lab report must be cited using APA format.
- Classroom Participation Assignments will range from answering questions at the end of each chapter to addressing contemporary topics completed in groups. The output of these assignments will be either written material or PowerPoint slides. All work must be cited in APA format.
- Final Project will be a hands-on lab project of the student's choice approved by the instructor. The output of this project will be a 10-to-20-minute PowerPoint presentation, cited using APA format.
- Final Exam will be comprehensive and will consist of T/F, multiple choice, fill-in-the-blank, and short essay questions.
- Group work is a very important part of the cyber security field; therefore many class assignments will be done in groups. It is important that every group member participate in group assignments and activities. The instructor reserves the right to adjust individual grades for group projects based on participation, frequency of communication, and feedback from group members.

Course Calendar

Quarter	Units of Study
1	<ul style="list-style-type: none"> • Course Introduction and Introduction to Cybersecurity • Recon and Denial, Spoofing, and Security Appliances • Demilitarized Zones (DMZ), Firewalls, Network Address Translation (NAT), and Virtual Private Networks (VPN)
2	<ul style="list-style-type: none"> • Network Threats, Network Device Vulnerabilities, Network Applications, Switch Attacks and Security, and VLAN's • Security Policies, Auditing and Accountability, and Risk Management • Access Control, Authentication and Authorizations • Cryptography and Cryptography Implementations and Attacks • Steganography • Data Management, Data Transmission Security, and Data Lost Prevention (DLP)
3	<ul style="list-style-type: none"> • Monitoring and Diagnosing Networks • Understanding Devices and Infrastructures • Malware, Vulnerabilities, and Threats • Host, Data, and Application Security • Protecting Wireless Networks, Wireless Attacks and Defense, and Securing the Cloud • Operations Security (OPSEC) and Security Administrations

Syracuse City School District
Career and Technical Education Program
Scope and Sequence
CSS400: Cybersecurity 400



Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Weeks 1-2 Course Introduction Introduction to Cybersecurity	<ul style="list-style-type: none"> What knowledge and skills are developed in this course? What is cybersecurity? Why is cybersecurity important? How are the personal effects of cybersecurity? 	<ul style="list-style-type: none"> Explain what cybersecurity is and how it affects the world. Create an argument on the importance of cybersecurity. Define and explain key vocabulary terms. 	<ul style="list-style-type: none"> Syllabus Assignment #1: Cybersecurity Cyber Lab Cyber Terms Bingo 	Career Ready Practices CRP 1,2,3,4,5,9,10	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 4,5,6,	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,6	CSDF 9-12.IC.1,2,3,4,7 9-12.CY.1,2,3
Weeks 3-5 Recon and Denial Spoofing Security Appliances	<ul style="list-style-type: none"> What types of resources make organizational reconnaissance readily available? How does a distributed reflective denial of service (DRDoS) increase the severity of a DoS attack? What countermeasures can be used to control TCP/IP hijacking? What methods should be employed to prevent a replay attack? What are the uses of a DMZ? 	<ul style="list-style-type: none"> Explain the types of resources that make organizational reconnaissance readily available. Perform reconnaissance. Explain how a distributed reflective denial of service (DRDoS) increases the severity of a DoS attack. Describe the countermeasures that can be used to control TCP/IP hijacking. Explain the methods that should be employed to prevent a replay attack. Explain the uses of a DMZ. Perform a User Datagram Protocol (UDP) flood attack. Perform zone transfers. Demonstrate how to configure network security appliance access. 	<ul style="list-style-type: none"> Performing a UDP Flood Attack Lab Recon and Denial Quiz Prevent Zone Transfers Lab Spoofing Quiz Configure Network Security Appliance Access Lab Security Appliances Quiz 	Career Ready Practice CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 6,9	CSDF 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5
Weeks 6-8 Demilitarized Zones (DMZ) Firewalls Network Address Translation (NAT)	<ul style="list-style-type: none"> What is the typical configuration for a DMZ configured as a dual-homed gateway? What makes bastion hosts vulnerable to attack? How should bastion hosts be hardened? 	<ul style="list-style-type: none"> Explain and demonstrate how to configure a DMZ. Explain what makes bastion hosts vulnerable to attack and how they can be hardened. Explain the difference between a network-based firewall and an application/host-based firewall. 	<ul style="list-style-type: none"> Labs: Configure DMZ, Configure Firewall, VPN Connection Quiz 	Career Ready Practice CRP 1,2,4,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 11,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards	CSDF

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Virtual Private Networks (VPN)	<ul style="list-style-type: none"> What is the difference between a network-based firewall and an application/host-based firewall? What traffic characteristics can be specified in a filtering rule for a packet filtering firewall? What is a VPN? 	<ul style="list-style-type: none"> Explain and demonstrate how to configure a perimeter firewall. Demonstrate how to set up a remote access VPN. Demonstrate how to set up a VPN connection on an iPad. 		IT-SUP 6,9	9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5
Weeks 9-12 Network Threats Network Device Vulnerabilities Network Applications Switch Attacks and Security VLAN's	<ul style="list-style-type: none"> How does segmenting a network increase network security? How does a passive attack differ from an active attack? Why is it important to apply new firmware or patches for devices within an organization? What security measures should be incorporated to control the use of networking software? What types of attacks are commonly perpetrated against switches? What are two advantages to creating VLANs on a network? 	<ul style="list-style-type: none"> Demonstrate how to secure a switch. Explain how segmenting a network increases network security. Explain how a passive attack differs from an active attack. Explain why it is important to apply new firmware or patches for devices within an organization. Describe the security measures that control the use of networking software. Describe the types of attacks that are commonly perpetrated against switches. Demonstrate how to harden a switch and secure access. List two advantages to creating VLANs on a network. Explore VLAN's from the Command Line Interface (CLI). 	<ul style="list-style-type: none"> Labs: Securing a Switch, Harden a Switch, Secure Access to a Switch Exploring VLAN's in the CLI Quiz 	Career Ready Practice CRP 1,2,7,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 4,5,7,12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,4,7,8,9 IT-NET 3,4 IT-PRG 1,3,7,9	CSDf 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5
Weeks 13-14 Security Policies Auditing and Accountability Risk Management	<ul style="list-style-type: none"> What are security policies? Why might security policies be crucial to have? How would you describe an audit? What is the significance of an audit? What does accountability mean in cybersecurity? What components are used to measure risk quantitatively? 	<ul style="list-style-type: none"> Explain what security policies are and why they are crucial to have. Demonstrate how to put security policies in place by creating policies. Describe an audit and explain its significance. Demonstrate how an audit is conducted through example. Explain what accountability means in cybersecurity. 	<ul style="list-style-type: none"> Security Policies Lab Security Policies Quiz Enable Device Logs Lab Audits Quiz Risk Management Quiz 	Career Ready Practice CRP 1,2,4,11,12	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,6 IT-NET 2	CSDf 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
		<ul style="list-style-type: none"> Explain what components are used to measure risk quantitatively. 			
Week 15 Access Control, Authentication and Authorizations	<ul style="list-style-type: none"> What are access control, authentication, and authorization? What purpose do they serve? Which authentication type requires proof of identity? What are the seven layers in layered security? 	<ul style="list-style-type: none"> Explain access control, authentication, and authorization and their similarities and differences. Give examples of each and scenarios where they would be used. Describe the seven layers in layered security. 	<ul style="list-style-type: none"> Access Control Quiz Authentication Quiz Authorization Quiz 	Career Ready Practice CRP 1,2,4,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,6 IT-NET 2	CSDF 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5
Weeks 16-17 Cryptography Cryptography Implementations and Attacks	<ul style="list-style-type: none"> What is cryptography and what is its main purpose? What significance does cryptography have in the cybersecurity field? How is the strength of a cryptosystem related to the length of the key? 	<ul style="list-style-type: none"> Explain what cryptography is and its significance in cybersecurity. Explain how the strength of a cryptosystem is related to the length of the key. Create an encrypted message. Decrypt encrypted emails and passwords. 	<ul style="list-style-type: none"> Assignment: Encrypting Secret Messages Assignment: Decrypting Secret Messages Cryptography Lab Cryptography Quiz 	Career Ready Practice CRP 1,2,4,7,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 7,9	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 2,4,9,10 IT-NET 1	CSDF 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5
Weeks 18-20 Steganography Data Management, Data Transmission Security, and Data Lost Prevention (DLP)	<ul style="list-style-type: none"> What is steganography and what purpose does it serve? How can steganography be used ethically and unethically? Why is steganography important in cybersecurity? Which governmental regulations should be followed when destroying data? How does wiping differ from degaussing? How does SSL verify authentication credentials? What is the purpose of a DLP system and how can it be implemented? 	<ul style="list-style-type: none"> Define steganography and explain its importance in cybersecurity. Explain how steganography can be used both ethically and unethically. List and explain the governmental regulations that should be followed when destroying data. Explain how wiping differs from degaussing. Explain how SSL verifies authentication credentials. Describe the purpose of a DLP system and how it can be implemented. 	<ul style="list-style-type: none"> Assignment: Hiding and Finding Data within images Data Hiding Lab Quiz: Date Hiding and Steganography Data Management Quiz Allow SSL Connections Lab Data Transmissions Security Quiz DLP Quiz 	Career Ready Practice CRP 1,2,4,7,8,9,11,12	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 2,3,4,5,8,10	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 6,8,10	CSDF 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
		<ul style="list-style-type: none"> Describe host-based security tools including antivirus software and firewalls. Use host-based security tools to improve computer security. 			
Weeks 21-22 Monitoring and Diagnosing Networks Understanding Devices and Infrastructures	<ul style="list-style-type: none"> What are some different network-based security tools? How are network security tools implemented on a system? What devices are needed in building a network? What is a Faraday cage designed to do? How does fiber optic cabling protect infrastructure? 	<ul style="list-style-type: none"> Describe network-based security tools, including intrusion detection and prevention systems. Explain the function of Network Access Controls and DMZ (demilitarized zone) in computer security. Explain the devices needed to build a network. Create a network working with a team. Describe what a Faraday cage is and what it is designed to do. Explain how fiber optic cabling protects infrastructure. 	<ul style="list-style-type: none"> Event Logs Lab Network Monitoring Quiz Mobile Devices Quiz Assignment: Designing a Network Network Infrastructures Quiz Network Infrastructures Protection Quiz 	Career Ready Practice CRP 1,2,4,5,7,8,11,12	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 2,3,4,8,9	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 5,6,9,8 IT-NET 1,4,5	CSDF 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5
Weeks 23-24 Malware, Vulnerabilities, and Threats Host, Data, and Application Security	<ul style="list-style-type: none"> How can host, data, and application security be evaluated? How can outsiders obtain information about a computer system? What steps can be taken to secure a personal computer? 	<ul style="list-style-type: none"> Explain how to evaluate host, data, and application security. Describe how outsiders can obtain information about a computer system. Explain how access into a system is maintained after exploitation. Describe and use Backdoor Trojan software. Describe the steps to secure a personal computer. Secure a system from vulnerabilities. Securely remove malware and document procedures. 	<ul style="list-style-type: none"> Configure Windows Defender Lab Malware Quiz Linux Host Security Quiz Adding Virtual Network Adapters Lab Host Virtualization Quiz Data Transmission Quiz 	Career Ready Practice CRP 1,2,4,5,7,8,9,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 5,8,9	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 2,5,6,9,10 IT-NET 1,4,5	CSDF 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5
Weeks 25-27 Protecting Wireless Networks Wireless Attacks and Defense	<ul style="list-style-type: none"> Why is it important to protect wireless networks? What is the cloud in computing? What does WEP use for the encryption key and why does this present a security problem? 	<ul style="list-style-type: none"> Explain why it is important to protect wireless networks. Define WEP, WPA, and WPA2. Describe what WEP uses for an encryption key and why this presents a security problem. 	<ul style="list-style-type: none"> Labs: Configure a Wireless Network, Configure a Rogue Host Protection, Harden a Wireless Network, Configure a WIPS 	Career Ready Practice CRP 1,2,4,7,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 9,10	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Securing the Cloud	<ul style="list-style-type: none"> Which encryption methods are used with WPA and WPA2? 	<ul style="list-style-type: none"> Describe the encryption methods used with WPA and WPA2. Describe penetration testing tools. Use penetration testing to find vulnerabilities in a computer system. Define the cloud as used in computing. Create a cloud application. 	<ul style="list-style-type: none"> Wireless Attacks and Defenses Quiz Cloud Services Quiz 	Pathway Standards IT-SUP 5,6 IT-NET 2	CSDF 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5
Weeks 28-29 Operations Security (OPSEC) Security Administrations	<ul style="list-style-type: none"> What is social engineering? How does social engineering compare to other foes? What is OPSEC? What is the purpose of security administrations? 	<ul style="list-style-type: none"> Define social engineering and explain methods for preventing it. Compare and contrast exploitation, social engineering, and phishing. Define and explain OPSEC. Demonstrate the role of security administrations. Create security admin accounts and non admin accounts and compare the two accounts. 	<ul style="list-style-type: none"> Operations Security Lab Operations Security Quiz Respond to Social Engineering Lab Security Administrations Quiz 	Career Ready Practice CRP 1,2,7,8,11	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 5,8,9	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 5,6 IT-NET 2	CSDF 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5
Weeks 30-31 Computer Forensics and Digital Evidence	<ul style="list-style-type: none"> What is the relationship between cybersecurity and computer forensics? What are the similarities and differences between cybersecurity and computer forensics? 	<ul style="list-style-type: none"> Explain the relationship between cybersecurity and computer forensics. Analyze the similarities and differences between cybersecurity and computer forensics. Demonstrate computer forensics processes through examining files and hard drives. Demonstrate how to secure an area. 	<ul style="list-style-type: none"> Digital Investigation Lab Hackers Lab Computer Forensics and Digital Evidence Quiz 	Career Ready Practice CRP 1,2,3,5,7,8,9,11,12	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 5,8,9,10	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 5,6 IT-NET 2	CSDF 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5
Weeks 32-33 Disaster Recovery and Incident Response Defense Planning	<ul style="list-style-type: none"> What are the effects on a company of a major security incident? How would a cybersecurity team handle a data breach? What is a countermeasure and how does it reduce the risk of threat? 	<ul style="list-style-type: none"> Describe the effects of a major security incident. Demonstrate how an incident is properly handled using chain of custody form. Create a scenario of a security incident and how should be handled. Explain chain of custody 	<ul style="list-style-type: none"> SANS Top Twenty Presentation Incident Response Report Lab Data Breach Project Disaster Recovery and Incident Response Quiz 	Career Ready Practice CRP 1,2,3,5,7,8,9,11,12	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 4,5,8,9,10	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 5,6 IT-NET 2	CSDF 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CCTC Standards	NYS Standards
Weeks 34-39 Internship	<ul style="list-style-type: none"> What purpose does the internship serve? How does an employee convey professionalism in the workplace? Why are internships necessary? How does an internship experience contribute to a professional portfolio? What are areas of improvement and challenge during the internship experience? 	<ul style="list-style-type: none"> Complete a variety of real-world activities. Apply the knowledge and skills learned in the classroom to working in a professional setting. Explain and demonstrate professionalism and ethics in the workplace. Comply with workplace policies and regulations. Communicate effectively both verbally and in writing. Explain the importance of being prompt, being able to take directions and being motivated to accomplish assigned tasks. Analyze and resolve problems that arise in completing assigned tasks. 	<ul style="list-style-type: none"> Final Project Based on Internship Internship Evaluation 	Career Ready Practice CRP 1,2,3,5,7,8,9,11,12	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 5,8,9	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 1,2,3,4,9,10 IT-NET 1,5 IT-PRG 3	CSDF 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5
Weeks 40 Review Final Presentation Final Examination	<ul style="list-style-type: none"> How can the knowledge and skills learned in this course be applied? 	<ul style="list-style-type: none"> Apply knowledge and skills to solve problems. 	<ul style="list-style-type: none"> Final Presentation Final Examination 	Career Ready Practice CRP 1,2,4,5,6,10,12	ELA 11-12R 1,2,4,7,8,9 11-12W 2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards IT 1-12	Literacy 11-12RST 1,2,4,7,8,9 11-12WHST 2,5,6,7
				Pathway Standards IT-SUP 9	CSDF 9-12.IC.1,2,3,4,5,7 9-12.CT.8,9 9-12.NSD.2,3,4,5 9-12.CY.1,2,3,4,5 9-12.DL.1,2,4,5

B. Teacher Certification

The self-study team reviews the teacher certification and training of the school or BOCES' instructional, paraprofessional, and support staff who deliver services within the CTE program seeking approval. New York State teacher certification review should include both CTE teachers and teachers of academic content within the proposed program.

Process

- Reviewers confirm that all CTE teachers hold appropriate New York State teacher certification for the program in which they will teach.
- Reviewers confirm that all teachers of academic content hold appropriate New York State teacher certification for the program in which they will teach.
- Reviewers confirm the appropriate NCLB highly-qualified status for the CTE teachers in programs offering academic credit.
- Reviewers confirm that staff delivering instruction in programs where certification, licensure, or registration by an external entity have acquired the necessary credentials.
- Reviewers confirm that professional development opportunities exist within the school district or BOCES for instructional, paraprofessional, and support staff to acquire and improve skills and knowledge related to instructional enhancement of the CTE program.

Documentation

Recommendations from the review of teacher certification should be included in the self-study report and reviewed by the external committee. A list of all teachers for the program and the New York State teacher certification(s) held by each must be attached to the Application for Career and Technical Education Program Approval.

Resources

New York State Office of Teaching Initiatives
<http://www.highered.nysed.gov/tcert/certificate/certprocess.htm>

Source: <http://www.p12.nysed.gov/cte/ctepolicy/guide.html>

Search Results

Select	First Name	Last Name	MI	City	State	Registration Status
<input checked="" type="radio"/>	BRITTANY	MAZZAFERRO	A	NEW HARTFORD	NY	N/A

[View Detail](#)

Certificate Information for New York State Teaching Certificate Holder

Certificate Title	Issue / Effective Date	Expiration Date	Status
Cybersecurity 7-12 Transitional A Certificate	09/29/2017	01/31/2024	Issued

Certified by the State of New York solely for purposes of employment by the City School District of the City of New York and the operation of the School District.

Search Results

Select	First Name	Last Name	MI	City	State	Registration Status
<input checked="" type="radio"/>	ERIC	MANGOLD	G	JAMESVILLE	NY	Registered Active

[View Detail](#)

Certificate Information for New York State Teaching Certificate Holder

Certificate Title	Issue / Effective Date	Expiration Date	Status
English Language Arts 7-12 Initial Certificate	02/01/2008	01/31/2013	Expired
English Language Arts 7-12 Professional Certificate	02/01/2013		Issued

Certified by the State of New York solely for purposes of employment by the City School District of the City of New York and the operation of the School District.

Search Results

Select	First Name	Last Name	MI	City	State	Registration Status
<input checked="" type="radio"/>	MATTHEW	CARON	C	MARCELLUS	NY	Registered Active

View Detail

Certificate Information for New York State Teaching Certificate Holder

Certificate Title	Issue / Effective Date	Expiration Date	Status
Special Education Permanent Certificate	02/01/2002		Issued
Coordinator of Work-Based Learning Programs for Career Awareness Extension Permanent Extension	11/28/2018		Issued
Special Education Provisional Certificate	02/01/2001	01/31/2006	Expired

Certified by the State of New York solely for purposes of employment by the City School District of the City of New York and the operation of the School District.

C. Technical Assessments Based on Industry Standards

The self-study team reviews the selection of a technical assessment for the program seeking approval. The selected technical assessment must be nationally-recognized and based on industry standards. It must be available to students enrolled in the approved program and must consist of three parts: written, student demonstration, and student project. Successful completion of the technical assessment is not a requirement for high school graduation, but is required for a student to earn a technical endorsement on the high school diploma

The New York State Education Department does not approve, endorse, or certify any technical assessment.

Process

- The school district or BOCES selects an appropriate industry standard technical assessment to measure student proficiency in the technical field for the program. The school district or BOCES may select a New York State licensing examination as the technical assessment.
- The school district or BOCES determines the scheduling and administration of technical assessments. It is not required that the technical assessment be administered at the conclusion of the program. Parts may be administered throughout a student's learning experience.
- The school district or BOCES determines the number of times a student may take a particular technical assessment.
- The school district or BOCES must comply with existing laws and regulations related to administration of technical assessments to students with disabling conditions and provide appropriate testing modifications. Restrictions on student eligibility for testing are the responsibility of the test producer.
- In the absence of an appropriate nationally-recognized industry standard based assessment, a consortium of local, regional, state, business and industry representatives may be formed to produce such an instrument.
 - Technical assessments must meet generally recognized psychometric criteria. Therefore, the consortium approach may be expensive because of the many steps required to insure assessment validity, reliability, and security.
 - An existing CTE advisory committee or craft committee is not a technical assessment consortium. The school district or BOCES must ensure that the assessment consortium adequately represents current business and industry standards for the specific career area for the program.
- Where an appropriate technical assessment exists, but consists of only one or two parts, a consortium must be formed to develop the missing part(s).
- The school district or BOCES must develop a system to collect student-level and program-level data on performance on the technical assessment.

Documentation

Recommendations on the technical assessment selection should be included in the self-study report and reviewed by the external committee.

Resources

New York State graduation requirements: <http://www.emsc.nysed.gov/part100/pages/1005.html>

Information on the Technical Endorsement: <http://www.emsc.nysed.gov/cte/ctepolicy/endorsement.html>

Source: <http://www.p12.nysed.gov/cte/ctepolicy/guide.html>

[Return to TOC](#)

Computer Maintenance and Repair

EXAM INFORMATION	DESCRIPTION																
Exam Number 884 Items 63 Points 74 Prerequisites INFORMATION TECHNOLOGY FUNDAMENTALS Recommended Course Length ONE YEAR National Career Cluster INFORMATION TECHNOLOGY Performance Standards INCLUDED (OPTIONAL) Certificate Available YES	<p>The knowledge and skills contained in these Computer Maintenance and Repair standards cover the necessary competencies for an entry-level IT professional including installing, building, upgrading, repairing, configuring, troubleshooting, optimizing, diagnosing, and performing preventive maintenance of basic personal computer hardware and operating systems.</p> EXAM BLUEPRINT <table> <tr> <th>STANDARD</th><th>PERCENTAGE OF EXAM</th></tr> <tr> <td>1- Hardware Components of a PC</td><td>28%</td></tr> <tr> <td>2- Windows Operating System of a PC</td><td>15%</td></tr> <tr> <td>3- Laptops, Mobile Devices, and Printers</td><td>14%</td></tr> <tr> <td>4- PC Security</td><td>8%</td></tr> <tr> <td>5- PC Networking</td><td>12%</td></tr> <tr> <td>6- PC Professionalism, Safety, and Impact</td><td>15%</td></tr> <tr> <td>7- Troubleshooting Techniques</td><td>8%</td></tr> </table>	STANDARD	PERCENTAGE OF EXAM	1- Hardware Components of a PC	28%	2- Windows Operating System of a PC	15%	3- Laptops, Mobile Devices, and Printers	14%	4- PC Security	8%	5- PC Networking	12%	6- PC Professionalism, Safety, and Impact	15%	7- Troubleshooting Techniques	8%
STANDARD	PERCENTAGE OF EXAM																
1- Hardware Components of a PC	28%																
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4- PC Security	8%																
5- PC Networking	12%																
6- PC Professionalism, Safety, and Impact	15%																
7- Troubleshooting Techniques	8%																

STANDARD 1

Students will understand, identify, and troubleshoot the hardware components of a typical PC.

Objective 1 Show competency in your understanding of BIOS components and settings by knowing and doing the following:

1. Firmware

1. Install upgrades

2. Components

1. Monitor CPU

2. Monitor Hard drive

3. Monitor Optical drive

4. Monitor RAM

3. Configurations

1. Monitor Boot sequence

2. Enable and disable devices

3. Monitor Clock speeds

4. Monitor Virtualization support

5. Set Date/time

4. Security

1. Explain drive encryption

2. Set passwords

3. Explain TPM

4. Explain lo-jack

5. BIOS Monitoring

1. Explain built-in diagnostics

2. Monitor Fan speeds

3. Monitor Intrusions

4. Monitor BIOS Clock

5. Monitor bus speed

6. Monitor temperature

7. Monitor Voltage

Objective 2 Show competency in your understanding of essential hardware components, cards and devices by knowing and doing the following:

1. Motherboard

1. Locate and explain RAM slots
2. Locate and explain CMOS battery
3. Locate and identify power connections and types
4. Locate and explain Fan connectors
5. Locate and explain Audio port
6. Locate and explain USB port
7. Locate and explain Power button
8. Locate and explain Power light
9. Locate and explain Reset button
10. Locate and explain Drive activity lights
11. Explain bus speeds
2. Expansion Cards
 1. Locate and explain sound cards
 2. Locate and explain network cards
 3. Locate and explain video cards
 4. Locate and explain USB cards
 5. Locate and explain serial and parallel cards
 6. Locate and explain storage cards
 7. Locate and explain Firewire cards
3. CPU
 1. Explain pros and cons of Intel v. AMD
4. Power Supply
 1. Explain SATA
 2. Explain Molex
5. Other Devices
 1. Input
 1. Explain Mouse
 2. Explain Keyboard
 3. Explain Touch screen
 4. Explain Scanner
 5. Explain Barcode reader
 6. Explain KVM
 7. Explain Microphone
 8. Explain Biometric devices
 2. Output

1. Explain Display devices
 2. Explain Speakers
3. Multimedia
 1. Explain Camcorder
 2. Explain Digital cameras
 3. Explain Microphone
 4. Explain Webcam
6. Storage
 1. Optical drives and burners
 1. Identify and explain media capacity of CD-ROM
 2. Identify and explain media capacity of DVD-ROM
 3. Identify and explain media capacity of Blu-Ray
 4. Identify and explain media capacity of CD-RW
 5. Identify and explain media capacity of DVD-RW
 6. Identify and explain media capacity of Dual Layer DVD-RW
 7. Identify and explain media capacity of BD-R
 8. Identify and explain media capacity of BD-RE
 2. Connections
 1. Identify eSATA
 2. Identify Ethernet
 3. Identify IDE configuration and setup (Master, Slave, Cable Select)
 4. Identify Firewire
 5. Identify internal SATA, IDE and SCSI
 6. Identify USB
 3. Drives
 1. Recognize hot swappable
 2. Recognize Solid state/flash
 1. Compact flash
 2. SD
 1. Micro-SD
 2. Mini-SD
 4. Internet
 1. Explain Cloud Storage
7. Cables
 1. Types

1. Identify coaxial
 2. Identify component
 3. Identify composite
 4. Identify DVI
 5. Identify ethernet
 6. Identify HDMI
 7. Identify RGB
 8. Identify s-video
 9. Identify SATA
 10. Identify eSATA
 11. Identify IDE
 12. Identify EIDE
 13. Identify USB
 14. Identify ethernet
 15. Identify phone
 16. Identify VGA
5. Connectors
1. Identify Audio
 2. Identify DisplayPort
 3. Identify DVI
 4. Identify HDMI
 5. Identify miniHDMI
 6. Identify parallel
 7. Identify RJ-45
 8. Identify serial
 9. Identify USB—A, B, mini, micro
 10. Compare VGA (analog) v. HDMI (Digital)

Objective 3 Show competency in your understanding of troubleshooting symptoms and tools by knowing and doing the following:

1. Troubleshooting (Motherboards, RAM, CPU and Power Supplies)
 1. Recognize unexpected shutdowns
 2. Recognize system lockups
 3. Recognize POST code beeps
 4. Recognize blank screen on bootup
 5. Recognize BIOS time and settings resets

6. Recognize attempts to boot to incorrect device
 7. Recognize continuous reboots
 8. Recognize noises
 9. Recognize loss of power
 10. Recognize overheating
 11. Recognize intermittent device failure
 12. Recognize fans spin – no power to other devices
 13. Recognize indicator lights
 14. Recognize smoke and burning smell
 15. Recognize BSOD
2. Troubleshooting (Hard Drives and RAID Arrays)
 1. Recognize read/write failure
 2. Recognize slow performance
 3. Recognize failure to boot
 4. Recognize loud clicking noise
 5. Recognize drive not recognized
 6. Recognize OS not found
 7. Recognize RAID stops working
 8. Recognize RAID not found
 9. Recognize BSOD
 3. Troubleshooting Tools
 1. Use Screwdriver
 2. Use External enclosures
 3. Use CHKDSK
 4. Use FORMAT
 5. Use File recovery software

Standard 1 Performance Evaluation included below (Optional)

STANDARD 2

Students will understand, identify, and troubleshoot the windows operating system components of a typical PC.

Objective 1 Show competency in your understanding of installing and configuring operating systems by knowing and doing the following:

1. Versions
 1. Compare and contrast different versions of Windows.
2. Features and Requirements
 1. Explain 32-bit v. 64 bit
 2. Identify purpose of the following: Aero, gadgets, user account control, bit-locker, shadow copy, system restore, ready boost, sidebar, compatibility mode, easy transfer, administrative tools, defender, Windows firewall, security center, event viewer, file structure and paths, category view vs. classic view
3. Upgrade Paths
 1. Explain differences between in place upgrades, compatibility tools, and Windows upgrade OS advisor
4. Booting, Installing and Configuring
 1. Boot system
 1. Boot with USB
 2. Boot with CD-ROM
 3. Boot with DVD
 4. Boot with PXE
 2. Installation methods
 1. Perform image installation
 2. Perform unattended installation
 3. Perform Upgrade
 4. Perform Clean install
 5. Perform Repair installation
 6. Utilize partitioning
 1. Dynamic
 2. Basic
 3. Primary
 4. Extended
 5. Logical
 6. Factory recovery partition
 3. Configuration
 1. Load alternate third-party drivers when necessary
 2. Set Time/date/region/language
 3. Install drivers, software and windows updates
5. Command Line Tools

1. Network
 1. Use PING
 2. Use IPCONFIG
 3. Use TRACERT
2. Operating System
 1. Use SHUTDOWN
 2. Use CD
 3. Use CHKDSK
4. Use [command name]/?
3. Utilities
 1. Use CMD
 2. Use REGEDIT (Caution)
 3. Use SERVICES.MSC
 4. Use MMC
 5. Use EXPLORER
 6. Use NOTEPAD
 7. Use MSINFO32
6. Administrative Tools
 1. Explain Computer management
 2. Explain Users and groups
 3. Explain Local security policy
 4. Explain Device manager
 5. Explain Task scheduler
 6. Explain Services
 7. Explain System configuration
 8. Explain Windows Firewall
 9. Explain Task Manager
 1. Applications
 2. Processes
 10. Explain MSCONFIG
 1. General
 2. Boot
 3. Services
 4. Startup
 5. Tools

7. Control Panel Features
 1. Set Internet options
 1. Connections
 2. Security
 3. General
 4. Privacy
 5. Programs
 6. Advanced
 2. Set Display settings
 1. Resolution
 3. Explain user accounts
 4. Explain folder options
 1. View hidden files
 2. Hide extensions
 3. General options
 4. View options
 5. Explain System settings
 1. Performance (virtual memory)
 2. Remote settings
 3. System protection
 6. Configure Windows Firewall
 7. Explain Power options
 1. Hibernate
 2. Power plans
 3. Sleep/suspend
 4. Standby
8. Preventive Maintenance
 1. Schedule backups
 2. Schedule check disks
 3. Schedule defragmentation
 4. Update Windows
 5. Incorporate patch management
 6. Incorporate fault tolerance
 7. Update Driver/firmware
 8. Update anti-virus

9. Utilize Tools
 1. Backup
 2. System restore
 3. Check disk
 4. Recovery image
 5. Defrag

Objective 2 Show competency in your understanding of troubleshooting symptoms and tools by knowing and doing the following:

1. Troubleshoot OS
 1. Explain failure to boot
 2. Explain improper shutdown
 3. Explain spontaneous shutdown/restart
 4. Explain device fails to start
 5. Explain missing dll message
 6. Explain services fail to start
 7. Explain compatibility error
 8. Explain RAID not detected during installation
 9. Explain slow system performance
 10. Explain boots to safe mode
 11. Explain file fails to open
 12. Explain missing Boot.ini
 13. Explain missing NTLDR
 14. Explain missing operating system
 15. Explain missing Graphical Interface
 16. Explain Graphical Interface fails to load
 17. Explain invalid boot disk
 18. Explain BSOD
2. Troubleshooting Tools
 1. Use recovery console
 2. Use repair disks
 3. Use pre-installation environments
 4. Use MSCONFIG
 5. Use DEFRAG
 6. Use REGSRV32
 7. Use REGEDIT

8. Use event viewer
9. Use safe mode
10. Use command prompt
11. Use emergency repair disk
12. Use automated system recovery

Standard 2 Performance Evaluation included below (Optional)

STANDARD 3

Students will understand and identify essential components, features, and functions of laptops, mobile devices, and printers.

LAPTOPS

Objective 1 Show competency in your understanding of laptop expansion and hardware components by knowing and doing the following:

1. Expansion
 1. Identify Express card /34
 2. Identify Express card /54
 3. Identify PCMCIA
 4. Identify SODIMM
 5. Identify Flash
2. Internal components
 1. Identify hard drive (2.5 vs. 3.5)
 2. Identify memory
 3. Identify CPU
 4. Identify optical drive
 5. Identify wireless card
 6. Identify mini-PCIe
 7. Identify battery
 8. Identify DC jack
 9. Identify plastics
 10. Identify speaker
 11. Identify system board
3. External components
 1. Identify keyboard

2. Identify touchpad
3. Identify screen
4. Display components
 1. Identify LCD
 2. Identify LED
 3. Identify OLED
 4. Identify Plasma
 5. Locate Wi-Fi antenna connector/placement
 6. Locate Inverter and its function
 7. Locate Backlight

Objective 2 Show competency in your understanding of key laptop features by knowing and doing the following:

1. Function Keys
 1. Control Dual displays
 2. Control Wireless (on/off)
 3. Control Volume settings
 4. Control Screen brightness
 5. Control Bluetooth (on/off)
 6. Control Keyboard backlight
2. Safety
 1. Differentiate Docking station vs. port replicator
 2. Differentiate physical laptop lock and cable lock

Objective 3 Show competency in your understanding of troubleshooting symptoms by knowing and doing the following:

1. Troubleshooting Common Symptoms
 1. Recognize no display
 2. Recognize dim display
 3. Recognize flickering display
 4. Recognize sticking keys
 5. Recognize intermittent wireless
 6. Recognize no power
 7. Recognize battery not charging
 8. Recognize ghost cursor
 9. Recognize num lock indicator lights
 10. Recognize No Bluetooth connectivity

11. Recognize No wireless connectivity
12. Recognize Cannot display to external monitor
2. Disassembling Tips
 1. Document and label cable and screw locations
 2. Organize parts
 3. Refer to manufacturer documentation
 4. Use appropriate hand tools
3. Troubleshooting Video and Display
 1. Recognize VGA mode
 2. Recognize no image on screen
 3. Recognize overheat shutdown
 4. Recognize dead pixels
 5. Recognize artifacts
 6. Recognize color patterns incorrect
 7. Recognize dim image
 8. Recognize flickering image
 9. Recognize distorted image
 10. Recognize discoloration (degaussing)
 11. Recognize BSOD

MOBILE DEVICES

Objective 4 Show competency in your understanding of mobile operating systems, hardware, connectivity, and email configuration by knowing and doing the following:

1. Android v. iOS Operating Systems
 1. Differentiate open source vs. closed source/vendor specific
 2. Explain app source (app store and market)
 3. Explain screen orientation (accelerometer/gyroscope)
 4. Explain screen calibration
 5. Explain GPS and geotracking
2. Hardware Considerations
 1. Explain concept of “no field serviceable parts”
 2. Explain concept of “typically no upgradeable”
 3. Explain touch interface
 4. Explain touch flow
 5. Explain multi-touch
 6. Explain solid state drives

3. Network connectivity
 1. Wireless/cellular data network (enable/disable)
 2. Bluetooth
 1. Enable Bluetooth
 2. Enable pairing
 3. Find device for pairing
 4. Enter appropriate pin code
 5. Test connectivity
4. Email Configuration
 1. Enable/disable Wireless/cellular data network
 2. Set Server address
 1. POP3
 2. IMAP
 3. Port and SSL setting
 3. Utilize Exchange
 4. Utilize Gmail

Objective 5 Show competency in your understanding of mobile device security and synchronization by knowing and doing the following:

1. Security Methods
 1. Passcode locks
 2. Remote wipes
 3. Locator applications
 4. Remote backup applications
 5. Failed login attempts restrictions
 6. Anti-virus
 7. Patching/OS updates
2. Device Synchronization
 1. Synchronize pictures
 2. Synchronize videos
 3. Synchronize contacts
 4. Synchronize programs
 5. Synchronize email
 6. Synchronize music
 7. Identify software requirements to install the application on the PC
 8. Recognize connection types to enable synchronization

PRINTERS

Objective 6 Show competency in your understanding of installing and maintaining printers by knowing and doing the following:

1. Installation

1. Configure wired printers
2. Configure wireless printers
3. Use appropriate printer drivers

2. Maintenance

1. Laser

1. Replace toner, applying maintenance kit, calibration, cleaning

2. Thermal

1. Replace paper, clean heating element, remove debris

3. Impact

1. Replace ribbon, replace print head, replace paper

Objective 7 Show competency in your understanding of troubleshooting symptoms and tools by knowing and doing the following:

1. Troubleshooting Printers

1. Recognize streaks
2. Recognize faded prints
3. Recognize creased paper
4. Recognize ghost images
5. Recognize toner not fused to the paper
6. Recognize paper not feeding
7. Recognize Paper jam
8. Recognize no connectivity
9. Recognize vertical lines on page
10. Recognize garbled characters on paper
11. Recognize backed up print queue
12. Recognize low memory errors
13. Recognize access denied
14. Recognize printer will not print
15. Recognize color prints in wrong print color
16. Recognize unable to install printer
17. Recognize error codes

2. Troubleshooting Tools

1. Use Maintenance kit

2. Use Compressed air
3. Use Toner vacuum
4. Use Printer spooler

Standard 3 Performance Evaluation included below (Optional)

STANDARD 4

Students will understand and identify essential component and practices of PC security.

Objective 1 Show competency in recognizing and preventing security threats by knowing and doing the following:

1. Threats
 1. Recognize social engineering
 2. Recognize malware
 3. Recognize rootkits
 4. Recognize phishing
 5. Recognize shoulder surfing
 6. Recognize spyware
 7. Recognize viruses
 1. Worms
 2. Trojans
2. Prevention
 1. Explain physical security
 1. Barriers
 2. Lighting
 3. Surveillance
 4. Guards
 2. Secure physical documents/passwords/shredding
 3. Explain digital security
 1. Antivirus
 2. Firewalls
 3. Antispyware
 4. Use authentication/strong passwords
 4. Emphasize user education
3. Best Practices

1. Set strong passwords
2. Require passwords
3. Restrict user permissions
4. Change default usernames
5. Disable guest account
6. Set screensaver required password
7. Disable autorun
4. Data Destruction/Disposal Methods
 1. Perform low level format vs. standard format
 2. Perform hard drive sanitation and sanitation methods
 3. Perform Overwrite
 4. Perform Drive wipe
 5. Perform physical destruction
 1. Shredder
 2. Drill
 3. Electromagnetic
 4. Degaussing tool

Objective 2 Show competency in your understanding of troubleshooting symptoms and tools by knowing and doing the following:

1. Troubleshooting Common Symptoms
 1. Recognize pop-ups
 2. Recognize browser redirection
 3. Recognize security alerts
 4. Recognize slow performance
 5. Recognize Internet connectivity issues
 6. Recognize PC locks up
 7. Recognize Windows update failures
 8. Recognize rogue antivirus
 9. Recognize spam
 10. Recognize renamed system files
 11. Recognize files disappearing
 12. Recognize file permission changes
 13. Recognize hijacked email
 14. Recognize access denied
2. Troubleshooting Tools

1. Recognize anti-virus software
2. Recognize anti-malware software
3. Recognize anti-spyware software
4. Recognize recovery console
5. Recognize pre-installation environments
6. Recognize event viewer
7. Recognize system restore
3. Best Practices
 1. Identify malware symptoms
 2. Quarantine infected system
 3. Disable system restore
 4. Remediate infected systems
 1. Update anti-virus software
 2. Scan and removal techniques (safe mode, pre-installation environment)
 5. Schedule scans and updates
 6. Enable system to restore and create restore point
 7. Teach end user

Standard 4 Performance Evaluation included below (Optional)

STANDARD 5

Students will understand and identify essential components and practices of PC networking.

Objective 1 Show competency in establishing a Small Office/Home office (SOHO) network by knowing and doing the following:

1. Network Devices
 1. Identify hub
 2. Identify switch
 3. Identify PoE
 4. Identify router
 5. Identify access point
 6. Identify modem
 7. Identify bridge
 8. Identify NAS

9. Identify firewall
10. Identify Internet appliance
11. Identify VoIP phones
2. Networking Practices
 1. Establish wireless connection
 2. Establish wired connection
 3. Establish WWAN (Cellular) connection
 4. Differentiate Home vs. Work vs. Public network settings
 5. Set firewall settings
 1. Exceptions
 2. Configuration
 3. Enabling/disabling
3. Wireless/Wired Routers
 1. Configure MAC filtering
 2. Configure channels (1-11)
 3. Configure p Establish wireless connection
 4. Port forwarding, port triggering
 5. Configure SSID broadcast (on/off)
 6. Configure wireless encryption
 7. Configure firewall
 8. Configure DMZ
 9. Configure DHCP (on/off)
 10. Configure WPS
 11. Configure NAT
 12. Configure basic QoS
4. Internet Connections
 1. Explain cable
 2. Explain DSL
 3. Explain dial-up
 4. Explain fiber
 5. Explain satellite
 6. Explain ISDN
 7. Explain cellular (mobile hotspot)
 8. Explain line of sight wireless internet service
5. Wired network

1. Change default usernames and passwords
 2. Enable MAC filtering
 3. Assign static IP addresses
 4. Disable ports
 5. Identify physical security
 6. Wireless network
 1. Change default usernames and passwords
 2. Change SSID
3.
 - Set encryption
 4. Disable SSID broadcast
 5. Enable MAC filtering
 6. Explain antenna and access point placement
 7. Explain radio power levels
 8. Assign static IP addresses
7. Troubleshooting
 1. Address symptoms
 1. No connectivity
 2. Limited connectivity
 3. Intermittent connectivity
 4. Local connectivity
 5. APIPA address
 6. IP conflict
 7. Low RF signal
 8. Slow transfer speeds
 2. Utilize proper tools
 1. Wire strippers
 2. Toner probes
 3. Crimper
 4. Cable tester
 5. PING
 6. IPCONFIG

Standard 5 Performance Evaluation included below (Optional)

STANDARD 6

Students will understand and identify essential components of PC professionalism, safety precautions, and environmental impact and controls.

Objective 1 Show competency in professionally and respectfully communicating by knowing and doing the following:

1. Communication
 1. Use appropriate language by avoiding:
 1. Jargon
 2. Acronyms
 3. Slang
 2. Be positive
 3. Listen respectfully to customer
 4. Be culturally sensitive
 5. Be punctual
 6. Avoid distractions:
 1. Personal calls
 2. Talking to co-workers while interacting with customers
 3. Personal interruptions
2. Personal Behavior
 1. Dealing with a difficult customer or situation
 2. Avoid arguing with customers and/or being defensive
 3. Do not minimize customer's problems
 4. Avoid being judgmental
 5. Clarify customer statements (ask open ended questions to narrow the scope of the problem, restate the issue or question to verify understanding)
3. Relationship of Trust
 1. Set and meet expectations and communicate status with the customer
 2. Offer different repair/replacement options if applicable
 3. Provide proper documentation on the services provided
 4. Follow up with customer/user at a later date to verify satisfaction
 5. Deal appropriately with customers confidential materials
 1. Located on a computer, desktop, printer, etc.
 6. First response behaviors
 1. Identify

- 2. Report through proper channels
- 3. Data/device preservation
- 7. Use of documentation changes
- 8. Chain of custody
- 9. Tracking of evidence/documenting process

Objective 2 Show competency in following proper safety and environmental guidelines by knowing and doing the following:

- 1. Personal and Customer Safety
 - 1. Disconnect power before repairing PC
 - 2. Remove jewelry
 - 3. Use proper lifting techniques
 - 4. Consider weight limitations
 - 5. Promote electrical fire safety
 - 6. Understand CRT safety – proper disposal
 - 7. Utilize cable management
 - 8. Comply with local government regulations
- 2. Environmental Protection
 - 1. Explain MSDS documentation for handling and disposal
 - 2. Monitor Temperature, humidity level awareness and proper ventilation
 - 3. Anticipate Power surges, brownouts, blackouts
 - 4. Explain Battery backup
 - 5. Explain Surge suppressor
 - 6. Remove Dust and debris
 - 1. Compressed air
 - 2. Vacuums
 - 7. Comply with local government regulations

Standard 6 Performance Evaluation included below (Optional)

STANDARD 7

Students will understand and identify general troubleshooting techniques.

Objective 1 Show competency in identifying the problem by knowing and doing the following:

- 1. Ask good questions

1. Before making changes, question the user and identify user changes to computer and perform backups
2. Establish a theory of probable cause
1. Look to the obvious first
3. Test the theory to determine cause
4. Determine next steps to resolve problem, if theory works
5. If theory is denied, re-establish new theory or escalate
6. Establish a plan of action to resolve the problem
7. Implement the solution
8. Verify full system functionality and if applicable implement preventive measures
9. Document findings, actions and outcomes

Standard 7 Performance Evaluation included below (Optional)

Computer Maintenance and Repair

Performance assessments may be completed and evaluated at any time during the course. The following performance skills are to be used in connection with the associated standards and exam. To pass the performance standard the student must attain a performance standard average of 8 or higher on the rating scale. Students may be encouraged to repeat the objectives until they average 8 or higher.

Student's Name: _____

Class: _____

PERFORMANCE STANDARDS RATING SCALE



STANDARD 1 - Hardware Components of a PC

Score:

- ☐ Demonstrate competency in understanding BIOS components
- ☐ Identify Hardware components, cards and devices
- ☐ Troubleshoot an unexpected shutdown, and a loss of power

STANDARD 2 - Windows Operating System of a PC

Score:

- ☐ Install and configure an operating system

STANDARD 3 - Laptops, Mobile Devices, and Printers

Score:

- ☐ Identify the internal components of a laptop
- ☐ Demonstrate knowledge of the Function Keys
- ☐ Demonstrate how to connect a mobile device to a network
- ☐ Install and configure a printer to a laptop and/or mobile device

STANDARD 4 - PC Security

Score:

- ☐ Identity Malware symptoms
- ☐ Disable system restore
- ☐ Demonstrate how to schedule scans and updates
- ☐ Explain digital security
 - Antivirus
 - Firewalls

- Antispyware
- Use authentication/strong passwords

STANDARD 5 - PC Networking

Score:

- ☐ Demonstrate how to set up a computer to a network

STANDARD 6 - PC Professionalism, Safety, and Impact

Score:

- ☐ Demonstrate ow to deal with a difficult customer or situation

STANDARD 7 - Troubleshooting Techniques

Score:

- ☐ Demonstrate how to ask good questions and identify user changes to computer and perform backups

PERFORMANCE STANDARD AVERAGE SCORE:

Evaluator Name: ____ Evaluator Title: _____ Evaluator Signature: _____ Date: _



SCSD CTE Student Portfolio

Definition: Student portfolios are a collection of personal documents, which showcase an individual's learning experiences, goals and achievements. Student portfolios are created and controlled by the student, facilitated by the instructor, and evaluated by outside entities.

Purpose: Students should be able to leave a program with as many tools in their toolbox as possible. Student portfolios are a way to assist students in marketing themselves in future interviews, by using the portfolio to illustrate his or her skills and/or talents.

SCSD CTE Student Portfolio Requirements

<input type="checkbox"/>	Table of Contents:	This should list each section and piece of the portfolio in the order it appears
<input type="checkbox"/>	Cover letter	A cover letter introducing the student to a potential employer about a specific job in his or her chosen pathway. Should focus on why the student is the best candidate for the job. It should compliment the resume, not repeat it.
<input type="checkbox"/>	Resume	Should be professionally formatted. Usually a one-page document listing the student's name, personal information (address, phone, and email), an objective, work history or extracurricular/community involvement, education, certifications/credentials, personal skills/interests, and references.
<input type="checkbox"/>	Letters of Recommendation	Students must include at least two (2) reference letters, provided by people outside the school who are familiar with his or her work or character. The reference letters can be employment-related, personal, or they can attest to the character of the student.
<input type="checkbox"/>	Certifications/Credentials	Students should include copies of any credentials and/or certifications they have earned as a result of their program.
<input type="checkbox"/>	Transcript	Student provides a copy of his or her full academic transcript.
<input type="checkbox"/>	Employability Profile	<p>Per NYSED: The work skills employability profile is intended to document student attainment of technical knowledge and work-related skills. Documents to validate skills reported on the profile could include, but are not limited to, an employer/teacher review of student work based on learning standards and expectations in the workplace, performance evaluations and observations.</p> <p>Students must have at least one employability profile completed within one year prior to school exit. If a student is involved in a number of work-based learning experiences and/or is employed part time, he/she may also have additional employability profiles as completed by others knowledgeable about his or her skills (e.g.,</p>

		employer and/or job coach).
<input type="checkbox"/>	College Research	A written research assignment focusing on three colleges offering programs in the student's chosen career pathway.
<input type="checkbox"/>	Career Plan	Per NYSED: "Career Plans are an important mechanism to add relevance and meaning to learning experiences across subject areas. The career development model used to create the Career Plan aligns with the CDOS standards." A Career Plan document can be found here: http://www.p12.nysed.gov/cte/careerplan/docs/SecondaryCommencLvl.pdf
<input type="checkbox"/>	Student Awards	This section is completely open ended. Students should use this section to illustrate any awards, projects, exemplars, service learning, or scholarships, they participated or earned during their high school years. They can show evidence through pictures, project documentation, news articles, program agendas, meeting minutes, videos, etc.
<input type="checkbox"/>	Work Samples	Examples highlighting <i>only the student's best work</i> , demonstrating the skills and competencies he or she has mastered. These should be presented professionally and be clearly captioned. <i>Should not be thought as a scrapbook.</i> Potential employers are only interested in the very best examples.

D. Postsecondary Articulation

The self-study team reviews the postsecondary articulation agreement for the program seeking approval. Postsecondary articulation agreements help students prepare for the transition from high school to advanced study in a particular career area. Articulation agreements provide direct benefits to students such as dual credits, college credits, advanced standing, or reduced tuition at a postsecondary institution. Articulation agreements may include several school districts and/or BOCES and multiple postsecondary institutions. The school district or BOCES may enter into multiple articulation agreements for a program seeking approval.

Process

- Reviewers confirm that the postsecondary articulation agreement is designed to prepare students for the transition from high school study to postsecondary study in the career area of the program seeking approval.
- Reviewers confirm that a postsecondary articulation agreement has been obtained that offers direct benefits to students in the program seeking approval.
- Reviewers confirm that the postsecondary articulation agreement includes the
 - prerequisite skills, knowledge, or coursework required of students to participate in the agreement
 - roles and responsibilities of each institution
 - duration of the agreement
 - endorsement by officials of each institution
- Signed articulation agreements must be on file within the school district or BOCES.

Documentation

Documentation of the postsecondary articulation agreement is maintained by the school district or BOCES and updated whenever modifications are made. Recommendations on the technical assessment selection should be included in the self-study report and reviewed by the external committee. A copy of the signed postsecondary articulation agreement must be attached to the Application for Career and Technical Education Program Approval.

Source: <http://www.p12.nysed.gov/cte/ctepolicy/guide.html>

**Articulation Agreement
between
Syracuse City School District (SCSD)
725 Harrison St, Syracuse, NY
and
Onondaga Community College
4585 West Seneca Turnpike, Syracuse, NY**

The signatories of this articulation agreement, Syracuse City School District (SCSD) and Onondaga Community College (OCC), declare their intention to participate in a partnership for the purpose of delivering educational instruction to eligible students. The parties to this agreement have reached the following understanding:

1. Term

The term of this agreement shall be for four years from July 1, 2022-June 30, 2026 and subject to the following conditions:

- Both parties have the option to extend this Agreement for one (1) additional four year period giving written notice to the College no later than ninety (90) days prior to the expiration date.

2. Modification and Waiver

No waiver or modifications shall be valid unless it is in writing and signed by OCC and SCSD.

3. Curriculum and Courses

- Students who have enrolled in the Cybersecurity program at Syracuse City School District will be eligible to enroll in courses and earn credit for:
 - ENG 103 and ENG 104: Freshman Composition and Literature I and II, subject to an annual Memorandum of Understanding and the identification of an OCC faculty member to teach the course on-premises at the Public Service Leadership Academy at Fowler High School; and;
 - CRJ 101, Justice System, through the Onondaga Community College, College Credit Now Program.
- The above courses offered through the OCC College Credit Now Program are required for the Cybersecurity, A.S. degree at OCC.
- Tuition for concurrent enrollment courses will be incurred according to all applicable requirements in place by the State University of New York. For courses taught by Onondaga Community College faculty, the Syracuse City School District will additionally incur the cost set by annual Memorandum of Understanding between SCSD and OCC.
- Students will be assisted in the course registration process by OCC. Students will also be supported in the admission process to Onondaga Community College through a specialized workshop and the Office of Student Recruitment.


4. Students

Each student must enroll and remit payment as required by SUNY for the course(s) with OCC through the College Credit Now registration process as


directed by the Director of Concurrent Enrollment and Secondary School Programs.

5. Entire Agreement

This Agreement Constitutes the entire Agreement between the College and SCSD with respect to the subject matter hereof. This Agreement supersedes any and all other agreements, whether oral or in writing, between parties with respect to the subject matter hereof.



Casey Crabill, Ed.D.
President
Onondaga Community College



Jaime/Alicea
Superintendent
Syracuse City School District

4/6/22

Date

4/5/22

Date

MOHAWK VALLEY COMMUNITY COLLEGE
UTICA-ROME, NY 13501
AND
SYRACUSE CITY SCHOOL DISTRICT
725 HARRISON STREET, SYRACUSE NY 13210

ARTICULATION AGREEMENT

The purpose of this articulation agreement is to develop an ongoing relationship between Mohawk Valley Community College (MVCC) and Syracuse City School District (SCSD), enabling each of these institutions to better serve their communal students. The relevant faculties of MVCC and SCSD subscribe to the following memorandum of understanding based on their mutual concern for providing applied programs that will build upon past student experiences and eliminate unnecessary duplication of instruction.

It is agreed, subject to the following conditions, that MVCC will grant 9-college credit hours for CI104-Introduction to Cybersecurity, IS120-Computer Operating Systems and Environments, and IS240-Networking Essentials, for all students who complete SCSD's Cybersecurity CTE program (*Note: This agreement is valid for up to 1-year post SCSD graduation*).

To receive college credit for CI104, IS120, and IS240, SCSD Cybersecurity CTE graduates must meet the following criteria:

1. Achieved a minimum cumulative average of 85 during their SCSD secondary school experience.
2. Completed the SCSD Cybersecurity CTE pathway.

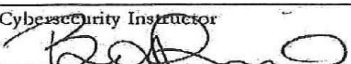
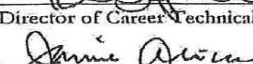
Process for granting credit owed:

1. Students will arrange a meeting with the Assistant Vice President (AVP), Academic Affairs or designee by calling 315-792-5446 upon entrance into MVCC. At the meeting, students will provide documentation supporting their attainment of the above criteria #1-2.
2. The AVP or designee will verify that the student meets criteria #1-2 identified above.
3. Upon verification of the student's fulfillment of criteria #1-2, the AVP or designee will communicate with MVCC's Registrar to authorize the granting of transfer credit for CI104, IS120, and IS240.

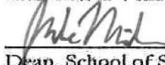
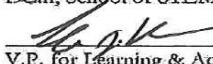
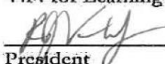
This agreement is effective for 5-years subsequent the completion of the signing process unless either party has significant changes in the program. SCSD may terminate the Agreement upon thirty (30) days written notice to the College. The College reserves the right to make final determination concerning all college credit awarded.

This Agreement incorporates all provisions of the Data Privacy Plan and Parents' Bill Of Rights For Data Security And Privacy executed by MVCC.

Syracuse City School District

Cybersecurity Instructor	Date
	3/11/22
Director of Career Technical Education	Date
	3/9/22
Superintendent	Date

Mohawk Valley Community College

	3/15/22
Dean, School of STEM-Transfer	Date
	3/23/22
V.P. for Learning & Academic Affairs	Date
	3/31/22
President	Date

Mohawk Valley Community College does not discriminate on the basis of age, race, creed, color, sex, sexual orientation, national origin, disability, veteran status, gender identity, pregnancy, religion, predisposing genetic characteristics, marital status or domestic violence victim status in admissions, employment, and treatment of students and employees or in any aspect of the business of the College.

[Return to TOC](#)

E. Work-based Learning

Work-based learning (WBL) is the “umbrella” term used to identify activities which collaboratively engage employers and schools in providing structured learning experiences for students. These experiences focus on assisting students to develop broad, transferable skills for postsecondary education and the workplace. A quality WBL experience can make school-based learning more relevant by providing students with the opportunity to apply knowledge and skills learned in the classroom to real world situations.

Time requirements that students in an approved program may devote to work-based learning experiences are set by administrators of the approved program. This time should be an outcome of the self-study report and external review phases of the approval process. Work-based learning experiences must be sufficient in length and rigor to contribute to student achievement of the State learning standards as well as specific technical competencies.

Process

- The school district/BOCES and the employer cooperatively plan all work experiences.
- The school district/BOCES set up a formal procedure for the supervision/coordination of all work-based learning experiences and must ensure that work-based learning coordinators are appropriately certified.
- The school district/BOCES provide work-based learning experiences for students with disabilities
- The school district/BOCES and employer must ensure compliance with federal and state labor laws, and the State Department of Labor regulations and guidelines.
- The school district/BOCES must explore and develop work-based learning experiences in settings that are relevant to the program.
- The school district/BOCES must comply with Commissioner’s Regulations and Department policy where credit towards graduation is being awarded.

Documentation

Recommendations for work-based learning should be included in the self-study report and reviewed by the external committee.

Resources

New York State Education Department Work Experience Manual <http://www.emsc.nysed.gov/cte/wbl/>

Source: <http://www.p12.nysed.gov/cte/ctepolicy/guide.html>



SYRACUSE CITY SCHOOL DISTRICT
Career and Technical Education

CTE

Internship Handbook

Preparing today's students for tomorrow's careers.



Syracuse City School District

Career and Technical Education Internship

Introduction to Career & Technical Education Work Based Learning

Introduction to Syracuse City School District CTE Internship

Career & Technical Education Program/Teacher Guidelines

1. Legal requirements of Internship Program
2. Career & Technical Education Program/Teacher Checklist

Employer Internship Partner Guidelines

1. Employer Safety Requirements
2. Expectations and responsibilities of the employer partner
3. Worksite/Employer Internship Partner Checklist

Student Intern Guidelines

1. Student Intern expectations and responsibilities
2. Student Internship Checklist

FORMS

NYSED Application for Employment Certificate (NYSED form attached)
SCSD Certificate of insurance to cover student liability (sample attached)
SCSD Memorandum of Agreement (Form #1)
SCSD Internship Program Application (Form #2)
SCSD Internship Ready to Work Assessment (Form #3)
SCSD Internship Training Plan (Form #4)
SCSD Notification of unpaid internship (Form #5)
SCSD Internship Safety Certification (Form #6)
SCSD Worksite Orientation (Form #7)
SCSD Weekly Time Log/Record of Attendance (Form #8)
SCSD Student Evaluation (Form #9)
SCSD Mentor Program Evaluation (Form #10)

Forms are available on SCSD CTE website www.syracusecityschools.com/cte



Introduction

Syracuse City School District Career and Technical Education Work Based Learning

Learning in the workplace is not a new concept. Informal, on-the-job training is an integral part of all workforce development. Work based learning (WBL) provides structured learning experiences for students through exposure to a range of occupations. The Harvard University report, Pathways to Prosperity (February, 2011) suggested that "Work-linked learning should play an especially important role in the new American system of pathways to prosperity. There is mounting evidence that this would be an effective strategy for encouraging young adults to complete both high school and post-secondary degrees. Co-operative education is a tested model that provides students with extensive work experience that is monitored by the school."

Learning in the workplace is connected to and supports learning in the classroom. Work based learning also helps students achieve established academic standards. Properly developed and supported, work based learning provides a practical context for school subject matter and enhances the traditional classroom learning. Work based learning activities promote the development of broad, transferable skills and are a key element of a rigorous and relevant education for students. It enables students to acquire the attitudes, skills and knowledge needed to succeed in today's workplace.

Employer partners can develop and support work based learning experiences that promote the attainment of workplace knowledge and skills. In doing so, they can support academic achievement and personal growth by designing, structuring, supporting and connecting work based learning experiences. Work based learning also supports professional, technical, and work-readiness skills development. Quality work based learning should:

- Be designed to enhance the learning of skills and workplace knowledge in all aspects of the industry
- Be structured to be safe, legal and measurable
- Be developmentally appropriate
- Have identified learning objectives and assess student performance
- Develop career ready practices and provide opportunities for reflection
- Be supported and documented by appropriate planning and training; and
- Comply with State and Federal labor laws

Syracuse City School District Career and Technical Education Internship

A Career and Technical Education Internship provides an important link between the classroom and the workplace for students age 16 and older. It is a structured, time-limited, career preparation activity in which students are assigned to a workplace for a defined period of time to participate in and observe firsthand within a given industry. The internship enhances and adds relevance to classroom learning. The internship may provide the opportunity to work in teams, rotate through a number of departments and job functions, or work on a project of interest to the student. It is essentially a partnership that links school, community, and business/industry to provide a real-world environment in which students are given the opportunity to apply, and thereby enhance, the knowledge and skills obtained in the classroom. The internship is related to the student's CTE program of study, with the primary goals of promoting:

- The exploration of and experience in a field of interest
- Exposure to a wide range of careers and jobs within an industry
- Opportunities to develop, practice and demonstrate new skills
- The acquisition of occupational knowledge and awareness of the skills and education needed to be successful in the industry



Career & Technical Program/Teacher Guidelines

Legal Requirements of SCSD CTE Internship Program

All Career and Technical Education Internship Programs have the common objective of providing opportunities for students to develop and demonstrate job skills at a supervised worksite. They are supported by training plans developed cooperatively by the employer, instructor, and student. There should be ongoing communication between the job mentors and the CTE teacher or work based learning coordinator concerning students' performance and needs.

Each internship program needs to have the following:

- New York State Education Department (NYSED) approval of the CTE program
- The employer understands that the student placement is governed by NYSED, New York State Workers' Compensation Board (NYSWCB), New York State Department of Labor (NYSDOL), and United States Department of Labor (USDOL) labor laws and regulations
- Employer is provided a Certificate of Insurance from school where school liability insurance protects the employer from any damage student may do in the workplace
- Students are given written notification that this program is unpaid and they are not due any wages per NYSDOL regulations
- Per NYS, students are required to receive coverage under the employer's Workers' Compensation Insurance if student is interning for a for-profit company. If student is interning at a non-profit entity, the student is required to be covered by the employer's visitors or volunteer insurance.
- Worksite must be in compliance with Occupational Safety and Health Administration (OSHA) regulations. Health and safety instruction/training appropriate for the job is provided by the SCSD and employer specific training is provided by the employer on the worksite.
- Memorandum of Agreement is in effect between the cooperating business and the education agency and outlines the responsibilities of the student, employer, parent/guardian, and school/coordinator, all of whom must sign to confirm their support of the agreement.
- Students complete an Internship Application indicating their understanding of, and agreement to, all rules and regulations of the program.
- Students receive instruction embedded within their CTE curriculum relating to the technical and career ready practices.
- An Internship Training Plan (ITP) is developed and used for each participating student. The plan identifies the general and specific job tasks the student will perform on the job, the desired learning outcomes of the experience, and the time frame the student will spend at each task. The training plan should be designed to ensure that the student will have a progressive learning experience.
- All participating students are meeting, or have met, academic requirements of their CTE programs and academic subjects. No students on academic probation will participate in the internship.
- Employment Certificate (Working Papers) for students provide verification that a student under age 18 is eligible for employment. The student, employer, and school must complete the form. Employment certificates are obtained at the high school – typically the main office, health office, or guidance office.
- Time Log/Record of Attendance provides an official record of the weekly and cumulative hours the student has worked during the experience. It must be maintained for each student.
- An intern evaluation will be done by the CTE teacher before the internship, at the midpoint of the internship and at the end of the internship. This same form will be completed by the on-site supervisor in the midpoint and at the end of the internship.



SCSD CTE Internship Program Checklist (To be completed by CTE teacher or WBL coordinator)

- ☐ NYSED has approved the CTE program
- ☐ The employer understands that the student placement is governed by NYSED, NYSWCB, NYSDOL, and USDOL labor laws and regulations
- ☐ NYSED Application for Employment certificate (working papers, usually available in school counseling office) has been verified (NYSED form attached)
- ☐ Employer is provided with a Certificate of Insurance from school to cover liability (sample attached)
- ☐ A written Memorandum of Agreement is in effect between the cooperating business and the education agency (**Form #1**)
- ☐ Students complete an Internship Application indicating their understanding of, and adherence to all rules and regulations set forth by the program. (**Form #2**)
- ☐ Students receive instruction embedded within their CTE curriculum relating to the technical and Career Ready Practices. The CTE teacher and the student have completed the SCSD CTE Internship Ready to Work Assessment (**Form #3**)
- ☐ An Internship Training Plan (ITP) is developed and used for each participating student (**Form #4**)
- ☐ Students are given written notification that this program will be unpaid and they are not due any wages per NYS DOL regulations (**Form #5**)
- ☐ All SCSD internship candidates have received appropriate safety certification for the industry provided by the school before internship and employer specific training and orientation is provided by the employer on the worksite (**Form #6 & Form #7**)
- ☐ All participating students are meeting, or have met, academic requirements of their CTE programs and academic subjects
- ☐ Review Time Log/Record of Attendance which serves as an official record of the hours the student has worked during the experience (**Form #8**)

REQUIRED FORMS

NYSED Application for Employment Certificate

Certificate of Insurance

SCSD Memorandum of Agreement
(Form #1)

SCSD Internship Program Application
(Form #2)

SCSD Internship Ready to Work
Assessment
(Form #3)

SCSD Internship Training Plan
(Form #4)

SCSD Notification of unpaid internship
(Form #5)

SCSD Internship Safety Certification (Form #6)

SCSD Worksite Orientation
(Form #7)

SCSD Weekly Time Log/Record of
Attendance
(Form #8)

Forms are available online at the SCSD CTE website : www.syracusecityschools.com/cte

CTE Teacher/WBL Coordinator



Date

Employer Internship Partner Guidelines

SCSD CTE Internship Employer Requirements

Safety

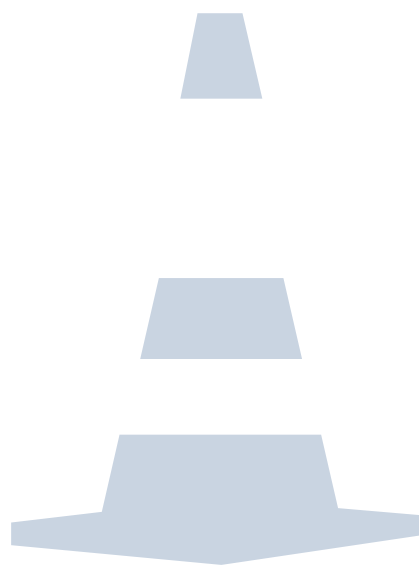
At all times, both school personnel and the employment site personnel must take appropriate steps to ensure that safe practices are stressed and followed. However, it is impossible to guarantee that no injuries resulting in medical expenses and liability will occur. The following prudent steps are encouraged:

1. In-school course content must include training related to safety at the worksite. Appropriate safety certification should be offered if possible. SCSD internship candidates will have received appropriate safety training before beginning their internship.
2. Any sites used for SCSD CTE internships will be reviewed by school personnel prior to placing a student at the worksite.
3. Employers must provide safety training information to interns as they would a new employee. Safety training must be provided if the employer engaged in a particularly hazardous occupation for minors as defined by the USDOL.
4. Provisions for student safety must be included as part of the training agreement signed by the employer, student, parent, and school representative.

Types of Liability Insurance and Risk Management

Workers' Compensation and Employer Liability Insurance

All employers will have a policy that provides coverage for the Workers' Compensation statutory benefits as well as liability coverage for certain employment-related situations. Verification of employer's Workers Compensation insurance will be included in the Memorandum of Agreement. The SCSD will also have insurance that covers the student participating in a school-related internship experience.



SCSD CTE Internship Expectations & Responsibilities of Employer

Before

- Determine projects or activities that would be appropriate for your student intern
- Communicate with staff that an intern will be at the workplace and identify mentors
- Designate one employee, the on-site supervisor, to work with coordinator/teacher to develop and define successful student objectives and experiences and record on the student Internship Training Plan

During

- Provide student with a Work Site Orientation to organization and any required training
- Train student intern for your work site, including all work site safety training
- Maintain a quality, safe and legal learning experience; provide effective supervision
- Use the Internship Training Plan as a guide for the internship; hold intern to employee standards/expectations; oversee, direct, and provide adequate tasking to maximize learning
- Meet with coordinator/teacher and student to decide on an ongoing communications strategy
- Evaluate intern work and provide constructive criticism
- Assist student in working toward learning outcomes
- Coordinate student schedule, approve weekly timesheets
- Communicate successes and opportunities at the workplace that the teacher can use to enhance the value of classroom connections
- Complete a student evaluation midway through internship and discuss with student

After

- Complete a final evaluation of the student
- Hold debriefing session and review performance with the student and teacher
- Complete a Program Evaluation



SCSD CTE Internship Employer Internship Partner Checklist (To be completed by On-Site Supervisor/Mentor)

- ☐ Meet with coordinator/teacher and student to agree on ongoing communication strategy (e-mail, text, telephone, etc.)
- ☐ A written Memorandum of Agreement is in effect between the cooperating business and the education agency ([Form #1](#))
- ☐ Work with coordinator/teacher to develop and define successful student objectives and experiences and record on the student Internship Training Plan ([Form #4](#))
- ☐ Coordinate student schedule, approve weekly time log/record of attendance ([Form #8](#))
- ☐ Communicate with staff that an intern will be at the workplace and identify on-site supervisor and/or mentor

On-Site Supervisor _____

Mentor Name _____

- ☐ Provide student with Work Site Orientation to organization and any required training (Form #7)
- ☐ Create and maintain a quality, safe and legal learning experience
- ☐ Hold intern to employee standards/expectation; provide student support and candid feedback
- ☐ Communicate successes and opportunities at the workplace that the teacher can use to enhance the value of classroom connections
- ☐ Complete an interim SCSD CTE Internship Ready to Work Assessment of student performance and discuss with student ([Form #3](#))
- ☐ Provide effective supervision
- ☐ Complete a final assessment of the student ([Ready to Work Assessment, Form #3 and Student Training Plan, Form #4](#))
- ☐ Complete a program evaluation ([Form #10](#))

REQUIRED FORMS

SCSD Memorandum of Agreement
(Form #1)

SCSD Internship Ready to Work
Assessment
(Form #3)

SCSD Internship Training Plan
(Form #4)

SCSD Worksite Orientation
(Form #7)

SCSD Weekly Time Log/Record of
Attendance
(Form #8)

SCSD Mentor Program Evaluation
(Form #10)

Forms are available online at the SCSD CTE website : www.syracusecityschools.com/cte

Employer/ Mentor _____



Date _____

Student Intern Guidelines

Expectations and Responsibilities of Students

Before

- Obtain working papers (if under 18)
- Return Internship Application and all permissionslips with appropriate signatures
- Meet with your teacher/coordinator and worksite supervisor to finalize an Internship Training Plan

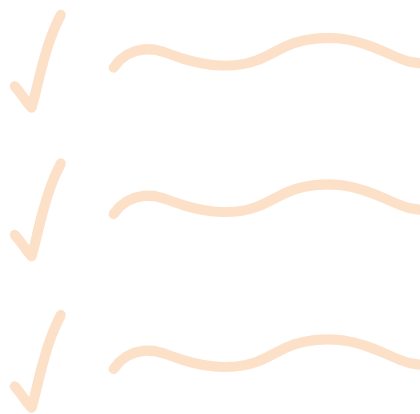
During

- Attend Orientation at the worksite
- Observe all workplace rules and regulations particularly those applicable to safety and security concerns
- Perform all duties, jobs and assigned tasks; treat internship like a real job
- Maintain regular work schedule and notify supervisor in advance of any vacation/appointments
- Track your hours as instructed on Weekly Timesheet
- Develop skill specific learning outcomes with your worksite supervisor
- Participate in ongoing reflection journal activities and skill building classroom assignments
- Communicate with your teacher/coordinator and worksite supervisor if issues arise
- Keep copies of all necessary paperwork (work journal, training plan, Weekly Time Log/Record of Attendance, and evaluations)

After

- Participate in self-evaluation and reflection activities
- Update your resume based upon new skills and experiences gained
- Send thank you note to employer

to do...



SCSD CTE Internship Student Checklist (To be completed by student)

- ☐ Obtain NYSED Application for Employment Certificate (usually available in school counseling office, application attached)
- ☐ A written Memorandum of Agreement is in effect between the cooperating business, the education agency, and signed by student and parents (**Form #1**)
- ☐ Return Internship Application (**Form #2**) and all permission slips with appropriate signatures
- ☐ Develop skill specific learning outcomes with your worksite supervisor
- ☐ Meet with your teacher/coordinator and worksite supervisor to finalize an Internship Training Plan for the internship (**Form #4**)
- ☐ Attend orientation at the worksite (**Form #7**)
- ☐ Observe all workplace rules and regulations particularly those applicable to safety and security concerns
- ☐ Perform all duties, jobs and assigned tasks; treat internship like a real job
- ☐ Maintain regular work schedule and notify supervisor in advance of any vacation/appointments
- ☐ Track your hours as instructed on time log/record of attendance (**Form #8**)
- ☐ Participate in ongoing reflection activities and skill building classroom assignments
- ☐ Communicate with your teacher/coordinator and worksite supervisor, if issues arise and keep copies of all necessary paperwork (work journal, training plan, Weekly Time Log/Record of Attendance, and evaluations)
- ☐ Participate in self-evaluation and reflection activities (**Forms #3 & #9**)
- ☐ Update your resume based on new skills and experiences gained
- ☐ Send thank you note to employer

REQUIRED FORMS

SCSD Memorandum of Agreement
(Form #1)

SCSD Internship Program Application
(Form #2)

SCSD Internship Ready to Work
Assessment
(Form #3)

SCSD Internship Training Plan
(Form #4)

SCSD Worksite Orientation
(Form #7)

SCSD Weekly Time Log/Record of
Attendance
(Form #8)

SCSD Student Evaluation
(Form #9)

*Forms are available online at the SCSD CTE
website: www.syracusecityschools.com/cte*

Student _____

Date _____



SCSD CTE Internship Forms

NYSED Application for Employment Certificate

SCSD Certificate of Insurance to Cover Student Liability

(Sample) Form #1 SCSD Memorandum of Agreement

Form #2 SCSD Internship Program Application

Form #3 SCSD Internship Ready to Work Assessment

Form #4 SCSD Internship Training Plan

Form #5 SCSD Notification of unpaid internship

Form #6 SCSD Internship Safety Certification

Form #7 SCSD Worksite Orientation

Form #8 SCSD Weekly Time Log/Record of Attendance

Form #9 SCSD Student Evaluation

Form #10 SCSD Mentor Program Evaluation

Forms are available on SCSD CTE website at www.syracusecityschools.com/cte



THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
ALBANY, NY 12234

APPLICATION FOR EMPLOYMENT CERTIFICATE

See reverse side of this form for information concerning employment of minors.

All signatures must be handwritten in ink, and applicant must appear in person before the certifying official.

PART I – Parental Consent – (To be completed by applicant and parent or guardian)

Parent or guardian must appear at the school or issuing center to sign the application for the first certificate for full-time employment, unless the minor is a graduate of a four-year high school and presents evidence thereof. For all other certificates, the parent or guardian must sign the application, but need not appear in person to do so.

Date.....

I, Age

[Applicant]

Home Address, apply for a certificate as checked below

[Full Home Address including Zip Code]

- ☐ Nonfactory Employment Certificate – Valid for lawful employment of a minor 14 or 15 years of age enrolled in day school when attendance is not required.
- ☐ Student General Employment Certificate – Valid for lawful employment of a minor 16 or 17 years of age enrolled in day school when attendance is not required.
- ☐ Full-Time Employment Certificate – Valid for lawful employment of a minor 16 or 17 years of age who is not attending day school.

I hereby consent to the required examination and employment certification as indicated above.

.....
[Signature of Parent or Guardian]

PART II – Evidence of Age – (To be completed by issuing official only)

..... – Check evidence of age accepted – Document # (if any)

[Date of Birth]

Birth Certificate State Issued Photo I.D Driver's License Schooling Record Other.....
[Specify]

PART III – Certificate of Physical Fitness

Applicant shall present documentation of physical exam from a school or private physician, physician's assistant or nurse practitioner licensed to practice within New York State. Said examination must have been given within 12 months prior to issuance of the employment certificate. Date of physical exam on file with school If physical exam is over 12 months, provide student with certificate of physical fitness to be completed by school medical director or private health care provider.

If the physical exam or Certificate of Physical Fitness is limited with regards to allowed work/activity, the issuing official shall issue a Limited Employment Certificate (valid for a period not to exceed 6 months unless the limitation noted by the physician is permanent, then the certificate will remain valid until the minor changes jobs. Enter the limitation on the employment certificate. THE PHYSICIAN'S CERTIFICATION SHOULD BE RETURNED TO THE APPLICANT.

PART IV – Pledge of Employment – (To be completed by prospective employer)

Part IV must be completed only for: (a) a minor with a medical limitation; and (b) for a minor 16 years of age or legally able to withdraw from school, according to Section 3205 of the Education Law, and must show proof of having a job.

The undersigned will employ residing at

[Applicant]

as at

[Description of Applicant's Work]

[Job Location]

for days per week hours per day, beginning a.m. p.m.

..... Factory ending..... a.m. p.m.

[Name of Firm]

Nonfactory

[Address of Firm]

..... Starting date

[Telephone Number]

[Signature of Employer]

PART V – Schooling Record – (To be completed by school official)

Part V must be completed only for a minor 16 years of age who is leaving school and resides in a district (New York City and Buffalo) which require a minor 16 years of age to attend school, according to Section 3205 of the Education Law.

I certify that the records of [Address]

[Name of School]

Show that whose date of birth is

[Name of Applicant]

Is in grade..... [Signature of Principal or Designee]

PART VI – Employment Certification – (To be completed by issuing official only)

Certificate Number Date Issued

[School or Issuing Center]

[Address]

[Signature of Issuing Officer]

THIS APPLICATION DOES NOT AUTHORIZE EMPLOYMENT

GENERAL INFORMATION

An employment Certificate (Student Nonfactory, Student General, or Full Time) may be used for an unlimited number of successive job placements in lawful employment permitted by the particular type of certificate.

A Nonfactory Employment Certificate is valid for 2 years from the date of issuance or until the student turns 16 years old, with the exception of a Limited Employment Certificate. A Limited Employment Certificate is valid for a maximum of 6 months unless the limitation noted by the physician is permanent, then the certificate will remain valid until the minor changes job. It may be accepted only by the employer indicated on the certificate.

A new Certificate of Physical Fitness is required when applying for a different type of employment certificate, if more than 12 months have elapsed since the previous physical for employment.

An employer shall retain the certificate on file for the duration of the minor's employment. Upon termination of employment, or expiration of the employment certificate's period of validity, the certificate shall be returned to the minor. A certificate may be revoked by school district authorities for cause.

A minor employed as a Newspaper Carrier, Street Trades Worker, Farmworker, or Child Model, must obtain the Special Occupational Permit required.

A minor 14 years of age and over may be employed as a caddy, babysitter, or in casual employment consisting of yard work and household chores when not required to attend school. Employment certification for such employment is not mandatory.

An employer of a minor in an occupation which does not require employment certification should request a Certificate of Age.

PROHIBITED EMPLOYMENT

Minors 14 and 15 years may not be employed in, or in connection with a factory (except in delivery and clerical employment in an enclosed office thereof), or in certain hazardous occupations such as: construction work; helper on a motor vehicle; operation of washing, grinding, cutting, slicing, pressing or mixing machinery in any establishment; painting or exterior cleaning in connection with the maintenance of a building or structure; and others listed in Section 133 of the New York State Labor Law.

Minors 16 and 17 years of age may not be employed in certain hazardous occupations such as: construction worker; helper on a motor vehicle, the operation of various kinds of power-driven machinery; and others listed in Section 133 of the New York State Labor Law.

HOURS OF EMPLOYMENT

Minors may not be employed during the hours they are required to attend school.

Minors 14 and 15 years of age may not be employed in any occupation (except farmwork and delivering, or selling and delivering newspapers):

When school is in session:

- more than 3 hours on any school day, more than 8 hours on a nonschool day, more than 6 days in any week, for a maximum of 18 hours per week, or a maximum of 23 hours per week if enrolled in a supervised work study program approved by the Commissioner.
- after 7 p.m. or before 7 a.m.

When school is not in session:

- more than 8 hours on any day, 6 days in any week, for a maximum of 40 hours per week.
- after 9 p.m. or before 7 a.m.

This certificate is not valid for work associated with newspaper carrier, agriculture or modeling.

Minors 16 and 17 years of age may not be employed: --

When school is in session:

- more than 4 hours on days preceding school days; more than 8 hours on days not preceding school days (Friday, Saturday, Sunday and holidays), 6 days in any week, for a maximum of 28 hours per week.
- between 10 p.m. and 12 midnight on days followed by a school day without written consent of parent or guardian and a certificate of satisfactory academic standing from the minor's school (to be validated at the end of each marking period).
- between 10 p.m. and 12 midnight on days not followed by a school day without written consent of parent or guardian.

When school is not in session:

- more than 8 hours on any day, 6 days in any week, for a maximum of 48 hours per week.

EDUCATION LAW, SECTION 3233

"Any person who knowingly makes a false statement in or in relation to any application made for an employment certificate or permit as to any matter by this chapter to appear in any affidavit, record, transcript, certificate or permit therein provided for, is guilty of a misdemeanor."



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:		
	PHONE (A/C, No, Ext):	FAX (A/C, No):	
	E-MAIL ADDRESS:		
	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A :		
	INSURER B :		
INSURED	INSURER C :		
	INSURER D :		
	INSURER E :		
	INSURER F :		

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY						EACH OCCURRENCE \$
	<input type="checkbox"/> COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence) \$
	<input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR						MED EXP (Any one person) \$
	500,000 Retained						PERSONAL & ADV INJURY \$
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE \$
	<input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						PRODUCTS - COMP/OP AGG \$
							\$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident) \$
	<input type="checkbox"/> ANY AUTO						BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS						BODILY INJURY (Per accident) \$
<input type="checkbox"/> HIRED AUTOS						PROPERTY DAMAGE (Per accident) \$	
						\$	
	UMBRELLA LIAB						EACH OCCURRENCE \$
	EXCESS LIAB						AGGREGATE \$
	DED <input type="checkbox"/> RETENTION \$						\$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						WC STATU-TORY LIMITS <input type="checkbox"/> OTH-ER <input type="checkbox"/>
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)						E.L. EACH ACCIDENT \$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$
							E.L. DISEASE - POLICY LIMIT \$

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER**CANCELLATION**

	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE

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Memorandum of Agreement

(Form #1)

Type of Work Based Learning Experience: Non-Paid Internship

This Work Based Learning Experience Agreement is entered into by and between the Syracuse City School District (SCSD) _____ (Student), his/her Parents/Guardian, _____ (Parent/Guardian), and his/her Work Experience Employer, _____ (Employer), on the date indicated below, whereby the Student will participate in a CTE Internship (Program at the Employer's place of business located at _____, on _____, during the hours of _____.

THE STUDENT UNDERSTANDS THAT HIS/HER CONDUCT IS A REFLECTION UPON THE SCHOOL NAME AND AGREES THAT HE/SHE WILL:

1. Provide his/her own transportation to and from the Employer's place of business (the SCHOOL, the Student's home school, the SCHOOL and the Employer are in no way responsible for providing the Student with transportation to and/or from the Employer's place of business at any time or for any incidents or accidents which may occur while the Student is on route to or from the Employer's place of business)
2. Demonstrate a conscientious attitude and be honest, punctual, cooperative, courteous and willing to learn while at the Employer's place of business.
3. Keep regular attendance as agreed upon with the Employer, excluding Employer-observed holidays, days on which the Employer's place of business is closed or other legal absences and understands that his/her attendance will be taken from his/her weekly attendance reports.
4. Keep regular attendance at his/her home school.
5. Give the Employer as much advance notice as possible if unable to report for work or to do so in a timely manner and contact the CTE teacher at (315) _____.
6. Report to SCHOOL if the Internship location is closed for any reason during at time in which the student is scheduled to be at the Internship location and SCHOOL is in session.
7. Complete weekly time log/record of attendance (Form # 8) reports as required by SCHOOL.
8. Engage in only those work based learning experiences approved by the supervisor at the work-site.

THE EMPLOYER AGREES THAT IT WILL:

1. Not permit the Student to replace any paid employee (in the case of an Internship).
2. Advise the Student of all company rules, regulations and policies which relate to the Student.
3. Explain to the Student the responsibilities and duties of his/her internship and shall correlate on-the-job training with safety instructions given by the SCHOOL.
4. The work of the Student in occupations declared particularly hazardous by the U.S. Department of Labor shall be (i) incidental to the Student's training; (ii) intermittent and for short periods of time; and (iii) under the direct and close supervision of a qualified and experienced person.
5. Provide direct supervision by an authorized employee to the Student as needed.
6. Complete an accident report form and return to SCHOOL in the event of an accident.
7. Review the Student's performance with him/her on a weekly basis and sign a weekly time sheet, complete an evaluation of the Student on forms provided by the SCHOOL.
8. Inform the SCHOOL Instructor/Coordinator when the Student is absent or not performing adequately by calling (315) _____.



(Form #1 Continued)

- Observe any and all laws that may relate to the Student's work experience.

THE SCHOOL AGREES THAT IT WILL:

- Carry the insurance listed for students during class activities including internships, job experiences and workplacement.
- Accident Insurance: SCHOOL carries tertiary accident insurance to cover medical expenses as a result of an accident. The parent's health insurance is primary and the home school district would be secondary. General Liability Insurance: SCHOOL carries general liability insurance to cover up to one million dollars for a single event. As added protection, a ten million dollar umbrella policy is also in effect.
- Assist the Student in securing internship placement regardless of his/her sex, race, color, national origin or disability (all inquiries and/or complaints regarding discrimination should be directed to the compliance officer, Patty Clark, SCSD Central Office, 725 Harrison Street, Syracuse, New York 13210. Telephone: (315) 435-4131.
- Provide the STUDENT with safety instructions correlated by the EMPLOYER with on-the-job training.
- Review with the Student and the Employer their respective responsibilities and obligations while participating in the Program.

The parties/signatories hereby agree that good communication and understanding between them is vital if the objectives of this Program are to be met and that joint conferences between the Student, Employer, Parent/Guardian, Instructor, and others may be scheduled from time to time in order to discuss:

- the student's progress
- any misunderstandings
- the reason for termination of the Agreement

This Agreement is not in effect until signed by all parties. This Agreement may be terminated at any time by any party upon written notice to the other parties.

We the undersigned, have reviewed and agreed to the terms and conditions set forth herein.

Date	____ / ____ / ____	_____	Student
Date	____ / ____ / ____	_____	Parent/ Guardian
Date	____ / ____ / ____	_____	Daytime Phone
		_____	Evening Phone
Date	____ / ____ / ____	_____	Employer/ Supervisor
Date	____ / ____ / ____	_____	CTE Teacher
Date	____ / ____ / ____	_____	Home School Principal

The Syracuse City School District hereby advises students, parents, employees and the general public that it is committed to providing equal access to all categories of employment, programs and educational opportunities, including career and technical education opportunities, regardless of actual or perceived race, color, national origin, Native American ancestry/ethnicity, creed or religion, marital status, sex, sexual orientation, age, gender identity or expression, disability or any other legally protected category under federal, state or local law. Inquiries regarding the District's non-discrimination policies should be directed to:
Executive Director of Student Support Services, Civil Rights Compliance Officer, Syracuse City School District, 725 Harrison Street • Syracuse, NY 13210 (315) 435-4131, Email: CivilRightsCompliance@scsd.us





Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

CTE Internship Program Application Form

Personal Information

(Form #2)

Last Name	First Name	Age	Date of Birth
Street		Home Telephone Number	Cell Phone Number
City, State, Zip		Emergency Contact Name	Telephone Number
Email Address		Relationship to Emergency Contact	
Primary Parent/ Guardian Name		Parent/ Guardian's Telephone Number	
Primary Parent/ Guardian Email		Home	
		Cell	
Secondary Parent/ Guardian Name		Secondary Parent/ Guardian's Telephone Number	
Secondary Parent/ Guardian Email		Home	
		Cell	
Working Papers Certificate Number		SCSD Student schedule should be attached to this form	
		School Counselor	

School Year Training/ Work Schedule Availability

Please list the hours you can work during a typical weekly schedule

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Sports, Clubs, and Other Activities

Transportation

Please check the appropriate response

Do you have a license? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, which license do you have? <input type="checkbox"/> Full License <input type="checkbox"/> Junior License
Do you drive to school? <input type="checkbox"/> Yes <input type="checkbox"/> No	License Number:

If you do not have a license, how do you plan on getting to and from your internship?

☐ Public Transportation ☐ Other



(Form #2 Continued)

INSURANCE COVERAGE IN CASE OF INJURIES TO STUDENT AT INTERNSHIP:**EMPLOYER'S WORKER'S COMPENSATION MUST COVER THE STUDENT IN CASE OF INJURIES AT TRAINING SITE.**PROGRAM AWARENESS STATEMENT TO BE CHECKED BY STUDENTS:

- ☐ In order to receive credit for my work-based learning experience, I must be training at a legal site approved by the school's CTE Teacher or work-based learning coordinator.
- ☐ I must notify my CTE teacher or work-based learning coordinator immediately if there is a change of work schedule or duties at the training site.
- ☐ Failure to report any disciplinary action, termination, or proper documentation of hours may result in the student not earning school credit.
- ☐ Students must present all daily attendance records to CTE teacher or work-based learning coordinator weekly and complete all assignments related to the program.
- ☐ I must immediately notify my work-based learning coordinator if I have or develop any medical condition(s) which affects my ability to participate in training, such as allergies, lifting heavy items, movement, standing, sitting, migraine headaches, etc. If there are any current conditions, please state them below. The presence of such a condition will not necessarily preclude me from participating in the internship and accommodations may be provided.

PARENTAL/GUARDIAN PERMISSION AND PICTURE/NEWS STORY RELEASE:

I give my child, _____ permission to participate in the work-based learning internship at the Syracuse City School District. By signing the parental permission form, it is understood that:

- All the information is accurate.
- In order to receive credit, students must work a minimum of 150 hours during the school year.
- All students must report to CTE teacher or work-based learning coordinator in the case of any change in employment.
- Failure to report any disciplinary action, termination, or proper documentation may result in the student not earning school credit.
- Students must present all daily attendance records to CTE teacher or work-based learning coordinator weekly and complete all assignments related to the program.
- A student with a junior license must only drive to school if they go directly to work following the school day and they must carry with them the proper paperwork as directed by the work-based learning coordinator.

In addition to agreeing with the above statements, please check off one:

- ☐ I give permission for my child's photograph or name to be used to promote the Work Experience Program.
- ☐ I do not want my child's photograph or name to be used to promote the Work Experience Program.

		/ /
Parent/ Guardian's Name	Parent/ Guardian's Signature	Date

		/ /
Relationship to Student	Student's Name	Date

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Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

CTE Internship Ready to Work Assessment

(Form #3)

Name

Program

Date

/ /

Scale

1 = Seldom. 2 = Occasionally. 3 = Usually. 4 =

1	Actively participates			
2	Shows enthusiasm			
3	Invigorates others			
GRIT				
4	Finishes whatever he or she begins			
5	Tries very hard even after experiencing failure			
6	Works independently with focus			
SELF CONTROL SCHOOL WORK				
7	Comes to class prepared			
8	Pays attention and resists distractions			
9	Remembers and follows directions			
10	Gets to work right away rather than procrastinating			
SELF-CONTROL INTERPERSONAL				
11	Remains calm even when criticized or otherwise provoked			
12	Allows others to speak without interruption			
13	Is polite to adults and peers			
14	Keeps his/her temper in check			

OPTIMISM				
15	Gets over frustrations and setbacks quickly			
16	Believes that effort will improve his or her future			
GRATITUDE				
17	Recognizes and shows appreciation for others			
18	Recognizes and shows appreciation for his/her opportunities			
SOCIAL INTELLIGENCE				
19	Is able to find solutions during conflicts with others			
20	Demonstrates respect for feelings of others			
21	Knows when and how to include others			
CURIOSITY				
22	Is eager to explore new things			
23	Asks and answers questions to deepen understanding			
24	Actively listens to others.			
ACADEMIC PERFORMANCE				
25	Completes all assignments with quality and timeliness			
26	Uses tools appropriately and safely			
COMMITMENT				
27	Attends class with one or less absences per quarter			
28	Demonstrates loyalty and appreciation to the program and instructors			





Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

CTE Internship Training Plan

(Form #4)

Student's Name	Email	
Student's Address	Telephone	Date of Birth
CTE Program Career Cluster	Working Papers Certificate #	
School Coordinator		
Phone Number		
Fax Number		
Email		
Employer		
Phone Number		
Fax Number		
Email		
Immediate Job Supervisor		
Phone Number		
Email		
Corporate Address		

Training Schedule

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Insurance Coverage

- ☐ Student is a non-paid intern – Worker's Compensation
- ☐ Student is a non-paid observer – Worker's Compensation

Transportation Provided by

- ☐ Student/parent will provide own transportation
- ☐ School district will provide transportation during school hours

Goals for this Work-Based Learning Student:

1. To explore, learn and develop the skills necessary for this career.
2. To develop the Career Ready Practices necessary for success in the global, competitive world.
3. To be trained in the safe operations of this job title.
4. To be able to demonstrate positive behavior and appropriate dress.



JOB TASKS AND LEARNING OUTCOMES (Determined by the Employer and Coordinator)	ACHIEVEMENT LEVEL AND COMMENTS 1. Mastered skill 2. Needs more training at the work site. 3. Needs more training at school. 4. Has not reached this training area.
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

(Form #4 Continued)

CAREER READY PRACTICES	Always	Frequently	Occasionally	Rarely
1. Student works cooperatively as a team member?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Student is able to read instructions for information and application.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Student can calculate and measure for information and application.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Student can behave in a responsible manner without supervision.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Student can communicate verbally and in writing to evoke clear understanding.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Student demonstrates good listening and follow through skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Student demonstrates critical thinking and problem solving skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Student can locate and manage resources for problem solving.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Student demonstrates a positive work ethic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Student demonstrates computer literacy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



(Form #4 Continued)

SAFETY TRAINING	DATE OF SAFETY TRAINING	ACHIEVEMENT LEVEL AND COMMENTS 1. Mastered safety training instruction. 2. Needs more safety training at work site. 3. Needs more safety training at school. 4. Has not reached this training area.
1. Safety precautions related to stairs, floors, office equipment and furniture.		
2. Safety precaution related to proper dress apparel, shoes, gloves, head, eye and ear protection.		
3. Safety precaution related to use of tools, machines, and chemicals.		
4. Safety precautions related to fire, weather and other natural disasters.		
5. Safety precautions related to sexual harassment and workplace violence.		

DRESS AND BEHAVIOR CODE FOR POSITION	ACHIEVEMENT LEVEL AND COMMENTS 1. Dresses/behaves appropriately 2. Needs to modify dress/behavior. 3. Needs personal consultation.

_____ Employer Name	_____ Employer Signature	_____ Date
		/ /
_____ Work-based Learning Coordinator Name	_____ Work Based Learning	_____ Date
_____ Coordinator	_____ Signature	_____ Date
		/ /
_____ Parent/ Guardian Name	_____ Parent/Guardian Signature	_____ Date
		/ /
_____ Student Name	_____ Student Signature	_____ Date
If you have any questions please do not hesitate to contact me at (315) 435-		_____ .

Thank you for your cooperation! _____, CTE Teacher

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Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD CTE Internship Notification of Unpaid Internship (Form #5)

This form serves as notification that the Syracuse City School District CTE Internship is an unpaid internship and students are not due any wages per New York State Department of Labor.

Student

Date / /

CTE Teacher/ WBL Coordinator

Date / /

Worksite Representative/ Mentor

Date / /





Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD Internship Safety Certification

(Form #6)

Student

_____/_____/_____
Date

Mentor or Supervisor

CTE/ WBL Teacher

Student CTE Program SCSD Career and Technical Program:

OSHA 10	<input type="checkbox"/>	_____/_____/_____
Safe Serv	<input type="checkbox"/>	_____/_____/_____
First Aid	<input type="checkbox"/>	_____/_____/_____
CPR	<input type="checkbox"/>	_____/_____/_____
Other	<input type="checkbox"/>	_____/_____/_____



SCSD Internship Worksite Orientation

(Form #7)

Student

Date

Mentor or Supervisor

CTE/ WBL Teacher

Company Orientation

Directions: Be sure that your student employee obtains information about the factors listed below. Check the information on each item as it is completed. Return the completed form to the CTE Teacher or Work Based Learning Coordinator.

Tour of Workplace

- ☐ A tour of the workplace
- ☐ An overview of the company safety plan
- ☐ Introductions to co-workers

Tour of Employee Facilities

- ☐ Lunch room
- ☐ Where to store personal belongings

Safety Plan

- ☐ Safety plan
- ☐ Stairwell/fire exits
- ☐ Fire Extinguishers
- ☐ Special hazards
- ☐ Accident prevention
- ☐ Safety Training Log, updated as needed

About the Company

- ☐ Discuss company organizational structure
- ☐ Review type of business, products, services
- ☐ Overview of who the customers are

Department/Position Specifics

- ☐ Explanation of work schedule
- ☐ Review of dress and conduct code
- ☐ Review of hours, breaks and lunch policies
- ☐ Location of time clock or sign-in
- ☐ Attendance requirements, including procedures for calling in when absent
- ☐ Relationship to working with other departments or co-workers

Job Specific

- ☐ How to use the phones and office equipment
- ☐ Supplies, paper, pens, etc.
- ☐ Job description, Work-Based Learning Plan and evaluation process

Supervisors Expectations

- ☐ Dress code including clothing, hair and jewelry
- ☐ Work performance including productivity and work habits
- ☐ Company culture

Materials provided to intern

- ☐ Copy of personnel handbook
- ☐ Organizational charts
- ☐ Telephone directory
- ☐ Security procedure

Employer/training sponsor

Date

Student

Date

CTE Teacher/WBL Coordinator

Date





Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

Weekly Time Log/Record of Attendance (Form #8)

Student _____

Training Title _____

Worksite Supervisor _____

Time Log for the Week of: ____ / ____ / ____

		Date	Start Time	End Time	Hours Worked
Sunday					
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					

Total Weekly Hours: _____

Student please list any new tasks performed this week: _____

By signing this timesheet, you are certifying that it is correct and truthful.

Student's Signature _____

Date

Supervisor Name _____ Phone _____

Date

Supervisor's Signature _____

Attention Worksite Supervisor:

If you have any questions or concerns, please contact:

CTE Teacher

Phone _____

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(315) 435-4131, Email: CivilRightsCompliance@scsd.us





Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD CTE Internship Student Evaluation (Form #9)

Name

CTE Program

____/____/____ - ____/____/____
/Dates of Internship

Year to Graduate

Please complete this form upon completion of your internship.

	Strongly	Agree	Indifferent	Disagree	Strongly Agree
Overall, I had a great experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I was actively involved in the team meetings and felt free to express my thoughts and opinions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My mentors encouraged and responded to my questions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have an increased appreciation for teamwork	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have a greater ability to ask good questions and synthesize information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I was presented with opportunities to learn by doing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I gained factual knowledge about career throughout the internship	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would recommend this opportunity to others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My time was well spent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would consider this employer as a future employer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My co-workers are generally positive about work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The best thing about my experience was... _____

The worst thing about my experience was... _____

Any suggestions on how we could improve the intern experience? _____





Syracuse City School District
725 Harrison Street, Syracuse, NY 13210

SCSD CTE Internship Mentor Program Evaluation (Form #10)

Student Name _____

SCSD School _____

Supervisor/ Mentor Name _____

Date

Internship Preparation

- ☐ Exceptiona
☐ IAdequate
☐ Inadequate

Modes of Communication with SCSD Personnel

In-Person
Email
Phone

Amount of Communication with SCSD Personnel

- ☐ Exceptionally
☐ Appropriate

Suggestions for improvement: _____

Additional comments: _____

Return to CTE teacher: _____

CTE Teacher Email



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Williams, Chief of Staff

NOTICE OF NON-DISCRIMINATION

The Syracuse City School District hereby advises students, parents, employees and the general public that it is committed to providing equal access to all categories of employment, programs and educational opportunities, including career and technical education opportunities, regardless of actual or perceived race, color, national origin, Native American ancestry/ethnicity, creed or religion, marital status, sex, sexual orientation, age, gender identity or expression, disability or any otherlegally protected category under federal, state or local law.

Inquiries regarding the District's non-discrimination policies should be directed to:

Assistant Superintendent for Student Support Services, Civil Rights Compliance
OfficerSyracuse City School District

F. Employability Profile

The employability profile is a record of student achievement. That may include documentation of the student's attainment of technical knowledge and work-related skills, endorsements, licenses, clinical experience, work experience, performance on core academic Regent's examinations, performance on industry based assessments, attendance, student leadership honors and achievements and other honors or accolades of student success.

Process

- An employability profile model is developed for the program
- A profile of student achievement is developed for each student in the program and is maintained in accordance with records and retention policies of the school district/BOCES.
- The profile of student achievement is reviewed and updated on a continuous basis by the student and the appropriate program/guidance personnel.
- The work skills to be mastered by students with disabilities should be aligned with the student's Individualized Education Program (IEP).

Documentation

Recommendations for the employability profile model should be included in the self-study report and reviewed by the external committee.

Source: <http://www.p12.nysed.gov/cte/ctepolicy/guide.html>



EMPLOYABILITY PROFILE

Cyber Security



Industry Based Skill Standards

Proficiency Definitions

NA = Not Applicable

1 = Developing

2 = Basic

3 = Proficient

4 = Mastery

	9th	10th	11th	12th
History of Computer Forensics				
Understands the origin and development of computer forensics. Identify organizations responsible for completing computer forensics lab work.				
Personal and Professional Goal Setting and Success				
Defines principles that contribute to personal and professional success. Name characteristics of a healthy, positive attitude				
Communicating for Success				
Demonstrates effective communication skills both verbally and in writing. Conducts public speaking in a professional manner. Understands how to deal				
Safety				
Understands how electrostatic discharge can effect electronics and destroy a piece of evidence. Understand how to safely enter a crime scene.				
Tools and Equipment				
Identify the proper tools associated with taking apart and repairing a computer system and its peripherals.				
Computer Hardware and Peripherals				
Understand all the components that make up a computer system. Be able to distinguish the difference between RAM and the hard drive. Troubleshoot a				
Computer Softwares				
Understands the difference between different computer softwares. Can explain the difference between opensource and proprietary software.				
Virtual Machines				
Understand the purpose and use of a virtual machine. Can setup and install a virtual machine of different operating systems.				
Windows Operating System				
Demonstrates an understanding how to navigate and modify settings in a Windows operating system. Understands the functions of Windows Command				

Industry Certifications Attained	Yes
Precision Exams	
A+ Certification	

Internships	Hours
Agency	
Agency	

	9th	10th	11th	12th
Linux Operating System				
Demonstrates an understanding how to navigate and modify settings in a Linux operating system. Understands the functions of Terminal.				
Security Tools				
Understands and demonstrates the use of several security tools when applied to network security. Such tools as Nmap and Wireshark.				
Networking				
Demonstrates a basic understanding of how a network is made up and how packets are delivered over the internet.				
Security Policies and Auditing				
Demonstrate how to create/review security policies. Understand the process of an audit and be able to perform one.				
Access Control, Authorization, Authentication				
Demonstrate and understand what access control is, who has what kind of authorization, and what is authentication and how do you know.				
Monitoring and Diagnosing Network				
Demonstrates how to properly monitor networks and data. Understand how to diagnose any security issue that may occur.				
Malware, Vulnerabilities and Threats				
Demonstrate and understand what malware is and what it can do. Understand how to protect networks from vulnerabilities and security				
Computer Forensics				
Demonstrate understanding of computer forensics through examining files and hard drives				
Disaster Recovery				
Demonstrate how an incident is properly handled using chain of custody form				

College Credits Attained	Yes
Total	



Cyber Security EMPLOYABILITY PROFILE

Student Name: _____

School Year: _____

Absences: _____

ID Number: _____

Teacher: _____

Final Grade: _____

Career Ready Practices / Career Development Standards

STANDARDS DEFINITIONS

NA = Not Applicable

1 = Developing

2 = Basic

3 = Proficient

4 = Mastery

	9th	10th	11th	12th
Acts as a responsible citizen/employee				
Is on time and prepared, follows workplace policies, demonstrates reliability and dependability, is polite and courteous to adults and peers, demonstrates appreciation, and is reliable and consistent in their actions				
Applies appropriate academic and technical skills				
Demonstrates an understanding of the academic knowledge and skills associated with their trade. Technical skills are developed with academic competencies including English language arts and science that are integrated within the CTE program.				
Attends to personal health and financial well-being				
Recognizes the benefits of physical, mental, social, and financial well-being to the importance of that success in their career. Accepts criticism and works towards self-improvement targets on a consistent basis.				
Communicates clearly, effectively, and with reason.				
Is able to communicate both verbally and in writing to express ideas and obtain information. Uses appropriate vocabulary to share information both verbally and in writing as well. Demonstrates active listening skills and verbal communication.				
Makes appropriate decisions				
Considers the environmental, social, and economic impacts of their decisions. Understands that their actions and decisions will impact other people directly. Works independently and responds positively to new ideas and suggestions.				
Demonstrates creativity and innovative thought				
Demonstrates creativity and new thinking to solve workplace problems as encountered. Is creative, innovative, and is eager to explore new ways of addressing issues and challenges that are encountered.				
Employs valid and reliable research strategies				
Seeks information to develop a deeper understanding of issues encountered. Uses technology as a tool to research, organize, and evaluate information critically incompetently. Interprets information and draws conclusions based on best analysis.				
Uses critical thinking skills and demonstrates perseverance				
Demonstrates problem-solving skills through the use of creative thinking, decision-making, and adaptability. Effectively reasons through difficult situations, and makes decisions even when faced with complex or challenging problems.				

	9th	10th	11th	12th
Models integrity, ethical behavior, and leadership				
Is accountable and transparent in all of their work and assignments. Consistently exhibits ethical behavior, and commitment to completing tasks as assigned. Develops and demonstrates leadership skills, assuming responsibility readily.				
Develops and implements a Career Plan				
Develops a career plan based on understanding of their personal goals and the career pathways that aligns to them. Develops resumes, cover letters, and examples of best work to aid in the job seeking process and/or entrepreneurial goals.				
Uses technology to enhance productivity				
Demonstrates an understanding of the use of technology related to their career pathway. Continually develops their ability to adapt to changing work environments using technology, including new tools and their associated applications.				
Works as a productive and respectful team member				
Actively participates as a member of a team recognizing and appreciating others skills and abilities. Adds to the collective value of the team, and invigorates others to add to the collective efforts and goals.				
Demonstrates reliability and dependability				
Regardless of tasks given, demonstrates reliable and dependable behaviors to meet the expectations as defined. Attendance and levels of participation meet expectations consistently. Take on additional responsibilities without prompting.				
Arrives on time and is prepared to work				
Consistently demonstrates promptness, reliability, and commitment to reporting for classes, work site experiences, and other assignments as defined. Reports prepared for work or education as requirements dictate, meets attendance requirements.				
Demonstrates safe working habits				
When engaging in worksite situations or learning labs, uses tools and equipment safely, observes general safety guidelines for material handling, and meets the expectations of maintaining a safe work environment for others.				
Demonstrates problem solving skills				
Addresses problems encountered using effective problem-solving strategies. Works to define potential solutions to problems, identifies and implements the best solution based on the information gathered and their skill and knowledge.				

Earned Technical Endorsement on Diploma YES ☐ NO ☐

Industry Credential(s) Awarded _____

Special Recognitions or Scholarships _____

Student Leadership Organization _____

[Return to TOC](#)