CTE Approval Self-Study Report

Forensic Science/ Crime Scene Investigation

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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

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Forensic science technicians

Quick Facts: Forensic Science Technicians	
2021 Median Pay	$61,930 per year $29.78 per hour
Typical Entry-Level Education	Bachelor's degree
Work Experience in a Related Occupation	None
On-the-job Training	Moderate-term on-the-job training
Number of Jobs, 2020	17,200
Job Outlook, 2020-30	16% (Much faster than average)
Employment Change, 2020-30	2,700

What Forensic Science Technicians Do

Forensic science technicians aid criminal investigations by collecting and analyzing evidence. Many technicians specialize in either crime scene investigation or laboratory analysis. Most forensic science technicians spend some time writing reports.

Work Environment

Most laboratory forensic science technicians work full time during standard hours. Crime scene investigators may work extended or unusual hours and travel to crime scenes within their jurisdiction.

How to Become a Forensic Science Technician

Forensic science technicians typically need at least a bachelor's degree in a natural science, such as chemistry or biology, or in forensic science. On-the-job training generally is required for both those who investigate crime scenes and those who work in labs.

Pay

The median annual wage for forensic science technicians was $56,320 in May 2021.

Job Outlook

Employment of forensic science technicians is projected to grow 16 percent from 2020 to 2030, much faster than the average for all occupations. However, because it is a small occupation, the fast growth will result in only about 2,700 new jobs over the 10-year period. Competition for jobs will be strong because of substantial interest in forensic science.

Related Occupations

Occupational Title	SOC Code	Employment, 2020	Projected Employment, 2030	Change, 2020-30	
				Percent	Numeric
Medical scientists, except epidemiologists	19-1042	133,900	156,600	17	22,600
Clinical laboratory technologists and technicians	29-2010	335,500	372,000	11	36,500
Medical and clinical laboratory technologists	29-2011	164,800	187,900	14	23,100
Biological technicians	19-4021	87,600	93,500	7	5,900
Detectives and criminal investigators	33-3021	112,500	115,300	2	2.800

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2016-17 Edition, Forensic Science Technicians, on the Internet at https://www.bls.gov/ooh/life-physical-and-social-science/forensic-science-technicians.htm (visited April 19, 2022).

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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

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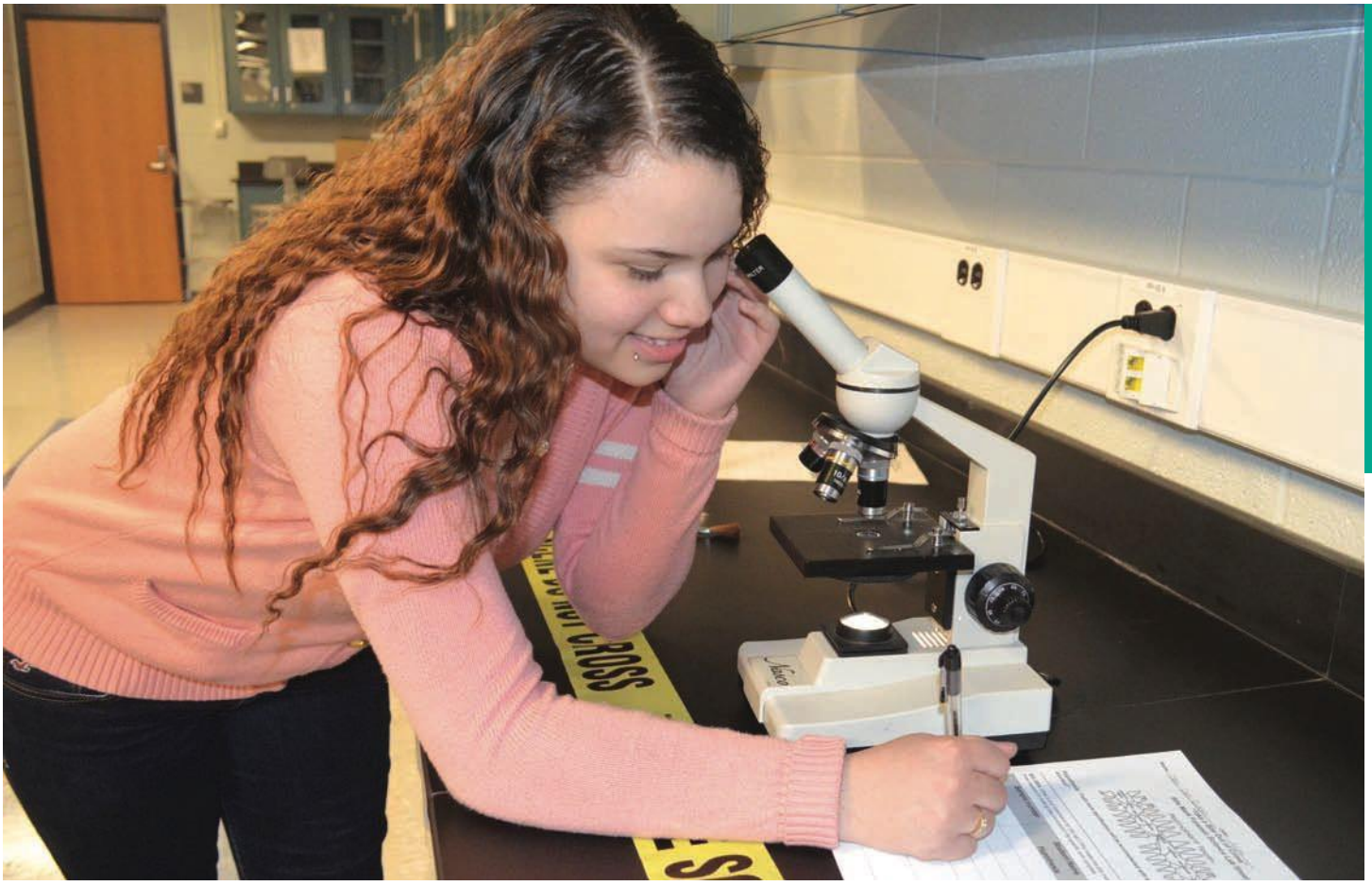

Forensic Science/ Crime Scene Investigation

You know what a Crime Scene Investigator looks like on television. Now, get to know the real career. Forensic Science plays a vital role in the criminal justice system – providing investigators with scientifically-based information through the analysis of physical evidence.

As a student in the Forensic Science/CSI pathway at the Public Service Leadership Academy at Fowler, you'll be exposed to the real, everyday life of a crime scene investigator, gaining knowledge and hands-on experience in:

- Collecting and preserving material evidence found at crime scenes – including measuring, recording and analyzing chemical substances (such as tissue samples, physical materials and ballistics evidence)
- Communicating with experts in fingerprinting, ballistics, handwriting, electronics, documents, chemistry, medicine or metallurgy to interpret evidence
- Reconstructing crime scenes and testifying as a witness in trials or hearings

CAREER OPPORTUNITIES:
Crime Scene Investigator, Private Investigator, Law Enforcement

Syracuse City School District
Career and Technical Education Program
Course Syllabus
CSI100: Forensic Science 100

Program Overview

Forensic Science is the application of scientific methods and techniques to gather and examine information which is used in a court of law. This program is a lab-based, hands-on course that will explore the work of forensic scientists. Recent advances in scientific methods and principles have had an enormous impact upon law enforcement and the entire criminal justice system. Students will learn how forensic scientists collect and document physical evidence, conduct laboratory analysis, and present results during testimony in a court of law. Laboratory exercises will include learning techniques commonly employed in forensic investigations. The program will examine actual case histories of crimes and requires students to apply basic understandings of physics, chemistry, biology, psychiatry, math, and more to reveal the whole story of a crime. Students who successfully complete the Forensic Science program will be prepared to excel in a two- or four-year post-secondary Criminal Justice or Forensics program.

Course Description

This course is an introduction to the Forensic Science pathway. Students will learn about the science and history behind crime detection and the roles of forensic scientists. Students will discover how forensic scientists collect and document physical evidence, conduct laboratory analysis, and present results during testimony in a court of law. Students will engage in evidence collection and basic laboratory and analytical tasks. Students will find out about the limits of eye witness evidence and the analysis of different types of physical evidence including documents, teeth marks, footprints, tool marks, tire marks, and handwriting. Students will also explore the foundations of physics, biology and chemistry and their application to forensic science. Students will participate in creating and conducting an independent research project for the Science Fair.

Work-Based Learning

Students will be connected with professionals in the forensic science field through field trips, job shadowing and Career Coaching, leading to opportunities for direct job training and real-world experience. Students will create and maintain a portfolio of their experiences to document the development of their skills, including a professional resume.

Pre-Requisites

N/A

Course Objectives

Students will:

1. Use the scientific method to solve an investigation.
2. Explain the limitations of eyewitness accounts.
3. Document and process evidence from a crime scene.
4. Perform comparative analysis on forensic evidence (documents, handwriting, impression evidence).
5. Engage in argument from evidence.
6. Plan and carry out an independent research project.
7. Explain how DNA is used in forensic investigations.
8. Explain how physics is used in forensic science.
9. Explain the professional, legal, and ethical responsibilities of forensic science professionals.

Integrated Academics

N/A

Concurrent Enrollment College Credit

N/A

Equipment and Supplies

- **School will provide:** Textbook, laptop and all lab materials
- **Student will provide:** 3-ring binder, composition lab book, notebook paper, pencil, pen, earbuds or headphones

Textbook

Brown, R., & Davenport, J. (2016). *Forensic Science: Advanced Investigations.* Boston, MA: Cengage Learning.

Saferstein, R. (2014). *Criminalistics: An Introduction to Forensic Science, 11th Edition.* New York: Pearson.
Spencer, J. T. (2012). *Introduction to Forensic Science: The Science of Criminalistics.* Boston, MA: Cengage Learning.

Grading

25% **Tests and Quizzes:** Tests include all summative assessments (written exams, projects, authentic products, presentations, etc.) Quizzes will cover the most recent material and review of important concepts.

25% **Labs:** Labs are often performed in groups of 2-4 students. ALL lab work will be collected and curated in a composition notebook. Lab reports will require group collaboration and individual work and some formal lab reports will be typed.

25% **Projects**

25% **Classwork:** Most work will be completed in class. Homework will mainly consist of work from absences.

(These percentages are estimates, and subject to change based on the nature of the students involved and the class itself.)

Additional Course Policies

- **Assignments:** In order to receive full credit, work must be complete before the bell rings on the day it is due. Late or incomplete work is NOT accepted for full credit. If an absence is excused, students will have as many days as they were absent to make up missed work. Absences make it very difficult to keep up with the coursework. Some work may not be possible to make-up due to the nature of activity (bellringers, labs, class discussions, etc.). See teacher with questions. It the students' responsibility to organize and keep track of their assignments! Most work will be turned in as a packet at the end of a unit or electronically via email or other means.
- **Labs:** Most lab work will be collected in a composition notebook. Labs will be performed in groups. Lab reports will require group collaboration and will require use of computer technology.
- **Lab Safety:** In case an accident occurs, report it immediately! Let the instructors decide on the proper course of action. Those not involved should clear the area.
- **Exams:** It is the student's responsibility to schedule with the teacher to make up a missed test/quiz for any excused absence within the week following their return. Students with an unexcused absence on the day of an exam will NOT be able to make up the exam or quiz. Students may retake quizzes if they show completed homework. Quiz and test dates will be announced 2 days and 5 days in advance, respectively.
- **Academic Integrity Policy:** Students are expected to behave ethically and with integrity. Academic dishonesty (including letting others copy) will result in no credit for the assignment and may include a meeting between the student, parent/guardian and an administrator. Please refer to school policies for more information on this policy. Please give help and hints, but not answers.

Course Calendar

Quarter	Units of Study
1	• Culture • Crime Scene Investigation • Mystery of the Romanov Family • Eyewitness Evidence
2	• Forensic Document Analysis • Impression Evidence: Teeth Marks, Footprints, Tool Marks, Tire Marks
3	• Impression Evidence: Teethmarks, Footprints, Toolmarks, Tiremarks (continued) • Science Fair/Independent Research • Forensic Chemistry: Handwriting and Chromatography • Forensic Biology
4	• Forensic Physics: Crash Curriculum and Egg Drop • Forensic Science in Society, History and Literature • Final Examination • Portfolio

Syracuse City School District
Career and Technical Education Program
Scope and Sequence
Forensic Science 100: Intro to Forensic Science

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CTE Standards	CCSS, Literacy, Math, NGSS Science & Engineering Practices
Week 1-2 **Culture**	• What are the expectations of this class?	• Get to know each other • Describe class expectations and rules • Describe what respect looks like • Demonstrate responsibility and work as a team • Describe examples of resilience • Write a claim and support with evidence • Vocabulary: CTE, Resilience, Grit, Tenacity, Evidence, Claim	• Activity: Getting to Know Each Other • Activity: Skittles Restorative Circle • Activity: Name Games • Extension: Trust Building • Gallery Walk: What does Respect Look Like? • Presentation: What does Respect Look Like? • Presentation: Who Am I?	• Act as a responsible and contributing citizen and employee. • Communicate clearly and effectively and with reason. • Consider the environmental, social and economic impacts of decisions. • Work productively in teams while using cultural global competence.	**WHST 1**
Week 2-6 **Crime Scene Investigation**	• How are the basics of science used in forensics? • How can the scientific method help solve problems? • What procedures are	• Use the scientific method to solve an investigation • Write a hypothesis • Write a claim and support with evidence • Explore the functions of a crime lab and role of a forensic scientist • Work as a productive member of a team. • Accurately sketch a crime scene	• Activity: Crime Scene KWL • Lab: Candy Evidence Collection • Lab: Deadly Picnic Crime Scene Sketch • Debate: Crime Scene Processing Timeline • Writing: CER Crime Scene Report blog • Activity: Case of the Missing Computer Chip Crime Scene Vocabulary	• Act as a responsible and contributing citizen and employee. • Apply appropriate academic and technical skills. • Communicate clearly and effectively and with reason. • Utilize critical thinking to make sense of	**RST1-6** **WHST 1-2, 4, 6, 10** **CCSM 1, 2, 4-6** **NGSSP 1,2,5-8** **HS-ETS1-1** **HS-PS2-3**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CTE Standards	CCSS, Literacy, Math, NGSS Science & Engineering Practices
	implemented at a crime scene and why are they important?	• Conduct a systematic search of a mock crime scene. • Demonstrate correct techniques of collecting and packaging evidence at a crime scene. • Collect evidence from a crime scene • Evaluate evidence to support a claim • Utilize critical thinking skills to reach a conclusion • Build and demonstrate mutual trust amongst peers • Work in a team to fulfill a common goal • Vocabulary: motive, recognition, consensus, hypothesis, evidence, microscopically, shortchanged, miscellaneous, accumulating, algorithm, fiber	• Writing: Case of the Missing Computer Chip Timeline & Newspaper Article • Activity: FBI Crime Lab Function ThingLink • Writing: CER CSI Report • Activity: Case of the Missing Computer Chip Timeline • Guest Speaker: CSI/Detective • Activity: Inside The FBI Crime Laboratory - NatGeo TV • Discussion: Inside The FBI Crime Laboratory • Lab: CSI Web Interactive • Parts of Crime Labs • Extension: CSI Web Adventures Cases 2-4 • Movie Notes: United Streaming Value of Evidence	problems and persevere in solving them. • Model integrity, ethical leadership and effective management. • Work productively in teams while using cultural global competence.	

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CTE Standards	CCSS, Literacy, Math, NGSS Science & Engineering Practices
Weeks 7-12 **Mystery of the Romanov Family**	• What is the mystery of the Romanov family? • How did Forensic Scientists solve the mystery of the Romanov family identities?	• Describe the mystery of the Romanov family • Describe the mystery of Anna Anderson's identity • Practice forensic examination skills • Draw and interpret a pedigree to calculate age, disease, heredity, etc. • Evaluate genetic inheretince with Punnett squares • Describe hemophilia and its genetic inheritance • Identify an individual based on their ear characteristics • Describe different types of evidence used by forensic scientists to identify Anna Anderson • Describe DNA tests performed by Forensic Scientists • Extract DNA • Differentiate between mitochondrial and nuclear DNA • Identify the sex of skeletal bones • Identify bones used in anthropology	• Activity: National Geographic Movie Discussion • Activity: Interpret Royal Family Pedigree • Project: What is hemophilia? Infographic Piktochart • Activity: Romanov Family Evidence Webquest • Lab: Ear Identification Test • Close Reading: Ear Identification • Summary: Amicus Curiae brief • Close Reading: Anastasia DNA Identification • Summary: Romanov blog • Lab: Strawberry DNA Extraction • Lab: Long Bone Identification & Measurement • Assessment: End of Unit Self-Reflection	• Apply appropriate academic and technical skills. • Communicate clearly and effectively and with reason. • Utilize critical thinking to make sense of problems and persevere in solving them. • Use technology to enhance productivity	**RST 1-4, 7-10** **WHST 1-2, 6-10** **CCSSMP 1, 3-5, 7-8** **NGSSP 1, 6-8** **HS-LS3-1** **HS-LS3-3**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CTE Standards	CCSS, Literacy, Math, NGSS Science & Engineering Practices
		• Vocabulary: Tsar/Czar, pedigree, hemophilia, qualitative, quantitative,			
Week 13-15 **Eyewitness Evidence**	• Is eyewitness evidence reliable? • How is a composite sketch made? • What is the role of a Forensic Artist?	• Discuss the limitations of eyewitness accounts • Explain factors that can influence visual memory • Create a composite sketch • Describe difference types of evidence: differentiate between physical evidence & testimonial evidence • Discuss the role of eyewitness evidence in the criminal justice system • Describe and practice the role of a Forensic Artist • Discuss the value and issues of eyewitness evidence	• Activity: Observation Skills • Eyewitness Basics Notes • Lab: Composite Sketching • Close Reading Annotation: Forensic Artist • Extension: Memory Match Game • Extension: Art of Crime Detection Virtual Lab • Article Annotation: Eyewitness Misidentification • CER: Should eyewitness testimony be allowed in courtrooms? • Debate: Who started the lunch room food fight? • Eyewitness: Lunchroom Fight • Composite Sketching & Forensic Art: Co-teaching with E. Williams • FACES composite sketch	• Act as a responsible and contributing citizen and employee. • Apply appropriate academic and technical skills. • Communicate clearly and effectively and with reason. • Demonstrate creativity and innovation. • Employ valid and reliable research strategies. • Use technology to enhance productivity.	**RST 1-3, 6-8, 10** **WHST 1-3** **CCSM 1, 3, 5** **NGSSP 1,3, 6-8** **HS-ETS1-4**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CTE Standards	CCSS, Literacy, Math, NGSS Science & Engineering Practices
Week 16-18 **Forensic Document Analysis**	• What documents are reviewed in forensic investigation? • How is handwriting analyzed and compared?	• Evaluate forgery • Compare source and known handwriting samples • Determine what a questioned document is and identify examples of it. • Analyze handwriting and identify its individual characteristics. • Recognize different types of altered documents and the techniques used to analyze them. • Describe the concept of comparative analysis • Describe the science of handwriting analysis	• Activity: Lindergh case review and summary • Document Examination notes • Lab: Handwriting Analyis and Forgery Interpretation • Lab: 4th Amendment Handwriting Analysis: 12 characteristics • Article Annotation: Mark Falzini new findings •	• Act as a responsible and contributing citizen and employee. • Apply appropriate academic and technical skills. • Communicate clearly and effectively and with reason. • Use technology to enhance productivity. • Utilize critical thinking to make sense of problems and persevere in solving them.	**RST 1-3, 6-8, 10** **WHST 1-3** **CCSM 1, 3, 5** **NGSSP** **1, 3, 6-8** **HS-ETS1-4**
Week 19-24 **Impression Evidence: Teethmarks, Footprints, Toolmarks, Tiremarks**	• What are examples of impression evidence left at crime scenes? • How is impression	• Explore the various types of physical evidence that can be found at a crime scene and learn how they are used to help investigators • Distinguish between various types of impression evidence.	• Footprint Lab • Footprint crime scene drawing • Toolmark Lab (sample impressions in clay) • Toolmark Challenge (matching unknown tools to known sample) • Bite Mark Evidence (with candy) • Bite Mark Challenge	• Act as a responsible and contributing citizen and employee. • Apply appropriate academic and technical skills.	**RST 1-2, 4-5, 7-8, 10** **WHST 1-2, 4, 6, 10** **CCSM 1-3, 5** **NGSSP**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CTE Standards	CCSS, Literacy, Math, NGSS Science & Engineering Practices
	evidence analyzed? • How can paint chips be observed, compared, and used to prove ownership?	• Differentiate between class and individual characteristics. • Provide examples of how impression evidence gives clues about the crime scene, person(s) at the crime scene, and events that occurred at the scene • Provide well-supported arguments that evidence such as foot, shoe, and dental impression is usually considered class evidence • Distinguish among latent, patent, and plastic impressions • Summarize the significance of foot and shoe impression evidence, and outline procedures for collecting impression evidence from different types of surfaces • Describe the features of tire impressions and skid marks used to help identify tire(s) or a vehicle's wheelbase, track width, and/or turning diameter • Compare and contrast skid marks, including how	• Activity: Caliper Tool Reading • Tire mark Lab • Guest: Officer Police Dept Firearms ID • Footwear Impressions Lab • Footwear Impressions Comparison • Hot wheels tire tracks lab • Real Deal: Tire Track Class Challenge (match unknown tracks to tracks lab)	• Communicate clearly and effectively and with reason. • Utilize critical thinking to make sense of problems and persevere in solving them. • Use technology to enhance productivity. • Work productively in teams while using cultural global competence.	**1-4, 6-8** **HS-ETS1-2** **HS-PS1-5** **HS-PS2-6**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CTE Standards	CCSS, Literacy, Math, NGSS Science & Engineering Practices
		they are produced, when they are produced, what they look like, and how they can be used to reconstruct events leading to a collision • Summarize the methods used to produce an impression or cast • Analyze impression evidence to determine if it consistent with evidence from a crime scene • Collect and preserve footwear impression left on soil by plaster casting.			
Weeks 25-29 **Science Fair/Independent Research**	• How do Forensic Scientists plan and carry out investigations? • How do Forensic Scientists construct explanations and design solutions?	• Create an experimental research question • Write a hypothesis to test a research question • Use credible sources to compile background research on a topic • Outline and draft a background research paper • Write a testable hypothesis statement • Construct an experimental design (with the independent, dependent,	• Brainstorm Activity • Research Plan and Project Proposal Conference • Credible Source Pyramid and Analysis • Activity: Research Notes • Research Background Writing Outline • Science Fair Journal Reflection • Lab: Conduct Research Experiment • Collect and Display Data in Graph form • Analyze data and summarize conclusions	• Apply appropriate academic and technical skills. • Communicate clearly and effectively and with reason. • Demonstrate creativity and innovation. • Employ valid and reliable research strategies. • Utilize critical thinking to make	**CCSL-**RST.11-12.1,2,3,4,7,8,9 WHST.11-12.1,2,4,7,8,9 • **CCSM** 1, 2, 3, 4, 5, 6, 7, 8 **NGSSP 1, 3-8** **HS-ETS1-1** **HS-ETS1-2** **HS-ETS1-3**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CTE Standards	CCSS, Literacy, Math, NGSS Science & Engineering Practices
		and control variables) to test a hypothesis • Create a data table to collect quantitative and qualitative data • Create a graph to display quantitative data • Analyze data for patterns and trends • Draft conclusions from data to support or abandon hypothesis and explain results • Prepare a research presentation display board • Present research conclusions to a public audience • Reflect and revise work	• Project: Science Fair Display Board Science Fair Poster Presentation (PSLA Science Fair, CTE Expo, MoST Science Fair)	sense of problems and persevere in solving them. • Use technology to enhance productivity. • Work productively in teams while using cultural global competence. •	
Week 30-32 **Forensic Chemistry: Handwriting & Chromatography**	• What is Chemistry? • How is Chemistry used in Forensic Science?	• Describe the concept of comparative analysis • Describe the science of handwriting analysis • Separate a mixture of inks • Explain the concept of chromatography • Describe the difference between a physical and chemical change • Explain the difference between a mixture, solution and colloid	• Handwriting Analysis • Intro to Coding/Digital Forensics • Ink Chromatography Test sample pens • Match unknown pens • Guest: Digital Forensics Expert • Arson Investigator • Physical vs Chemical Change: Butter Lab • Evaluation of Items with similar chemical composition: How sweet it is • Phase Changes: Melting Apples • Newton's Law of Cooling: Spuds	• Act as a responsible and contributing citizen and employee. • Apply appropriate academic and technical skills. • Attend to personal health and financial well-being. • Communicate clearly and effectively and with reason. • Consider the environmental, social	**RST 1-2, 4-5, 7-8, 10** **WHST 1-2, 4, 6, 10** **NGSSP 1-4, 6-8** **HS1-PS1-1** **HS1-PS1-2**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CTE Standards	CCSS, Literacy, Math, NGSS Science & Engineering Practices
		• Analyze physical and chemical properties of evidence collected from a crime scene. • Analyze physical and chemical properties of evidence collected from a crime scene.		and economic impacts of decisions. • Demonstrate creativity and innovation. • Employ valid and reliable research strategies. • Utilize critical thinking to make sense of problems and persevere in solving them. • Model integrity, ethical leadership and effective management. • Plan education and career paths aligned to personal goals. • Use technology to enhance productivity. • Work productively in teams while using cultural global competence.	
Week 33-35 **Forensic Biology**	• What is DNA? • How is DNA used in Forensic Science investigations?	• Diagram the DNA molecule • Explain how DNA is used in forensic investigations • Explain the 4 types of macromolecules • Explain how indicators are used in chemical analysis	• Strawberry DNA Extraction • DNA Foldable • Measurement Metric System • Macromolecule Foldable • Intro to DNA • Germicide Cafeteria • Who killed the Chef?	• Act as a responsible and contributing citizen and employee. • Apply appropriate academic and technical skills.	**RST 1-2, 4-5, 7-8, 10** **WHST 1-2, 4, 6, 10** **CCSSMP 2-5, 7** **NGSSP**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CTE Standards	CCSS, Literacy, Math, NGSS Science & Engineering Practices
		• Support a claim with evidence	• Who Stole Jerell's iPod? (Macromolecules Indicators) • Guest: Medicolegal Death Forensics Bio SU Grad Student	• Attend to personal health and financial well-being. • Consider the environmental, social and economic impacts of decisions. • Utilize critical thinking to make sense of problems and persevere in solving them. • Model integrity, ethical leadership and effective management. • Use technology to enhance productivity. • Work productively in teams while using cultural global competence.	**1-4, 6-8** **HS1-LS1-1** **HS1-LS1-3** **HS1-LS1-6** **HS1-PS1-5**
Week 36-38 **Forensic Physics: Crash Curriculum & Egg Drop**	• How is Physics used in Forensic Science? • How can accidents be reconstructed? • How can it be determined if a vehicle has been tampered with	• Perform vehicular accident reconstruction • Analyze a vehicle's condition to understand if a scenario is an accident or caused intentionally • Explain and apply Newton's laws of motion to crime scene reconstruction • Design an solution for an engineering challenge	• CRASH notes (Newton's Laws, vehicle dynamics, occupant dynamics) • Present care • Student investigation • Discussion of results • CRASH curriculum • Accident Scene reconstruction • Egg Drop Competition • Service Project • Guest: Crash Scene Reconstruction	• Act as a responsible and contributing citizen and employee. • Apply appropriate academic and technical skills. • Communicate clearly and effectively and with reason. • Consider the environmental, social	**RST 1-2, 4-5, 7-8, 10** **WHST 1-2, 4, 6, 10** **NGSS** **1-8** **HS-PS3-1** **HS-PS3-2** **HS-PS3-3** **HS-ETS1-2** **HS-ETS1-3**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CTE Standards	CCSS, Literacy, Math, NGSS Science & Engineering Practices

	or if it was accidental?		• CSI Geocaching Activity (intro to crime mapping?)
			  • Accident Scene Reconstruction Worksheets
			  • Hands on laboratory in the automotive bay. Analysis of automobile's condition.
				and economic impacts of decisions.
				• Demonstrate creativity and innovation.
				• Employ valid and reliable research strategies.
				• Utilize critical thinking to make sense of problems and persevere in solving them.
				• Use technology to enhance productivity.
				• Work productively in teams while using cultural global competence.	

Week 39-40 **Forensic Science in Society, History & Literature**	• What is legally and ethically expected of Forensic Scientists and Crime Scene Investigators? • Who's Who in Forensic Science?	• Describe the influence of media (Sherlock Holmes, crime scene novels, television shows) on Forensic Science • Explain the "science of deduction" • Explore the history and legal responsibilities of forensic science. • Recognize the major contributors to the development of forensic science. • Illustrate the history of forensic science.	• Legal Jurisdictions • Close Reading: Sherlock Holmes • Deflate Gate • CSI Effect • Career Research Presentation • Guest: Expert Witness/Medical Examiner	• Attend to personal health and financial well-being. • Communicate clearly and effectively and with reason. • Consider the environmental, social and economic impacts of decisions. • Demonstrate creativity and innovation. • Employ valid and reliable research strategies.	**RST 1-2, 7-10** **WHST 2, 4-10**

Time Frame Unit of Study	Key Questions	Key Learning Targets (Students will know and be able to)	Assessment Evidence of Learning	CTE Standards	CCSS, Literacy, Math, NGSS Science & Engineering Practices
		• Identify career-related information that is relative to making career decisions. • Summarize the ethical standards of a forensic scientist. • Distinguish between different roles in the forensic science field		• Plan education and career paths aligned to personal goals. • Use technology to enhance productivity.	
Final Examination Portfolio	• What are the main learning goals for this past year in forensic science?	• Complete the assessment demonstrating a thorough knowledge of forensic science and crime scene investigation	• Crime Scene Simulations: Photography, Sketch, Search, Mutual Aid, Search & Seizure, Final examination • Scenario Evaluations • Course Evaluations • What's Your Advice? • Letter to Yourself	• Act as a responsible and contributing citizen and employee. • Apply appropriate academic and technical skills. • Communicate clearly and effectively and with reason. • Use technology to enhance productivity.	

Syracuse City School District
Career and Technical Education Program
Course Syllabus
CSI200: Forensic Science 200

Program Overview

Forensic Science is the application of scientific methods and techniques to gather and examine information which is used in a court of law. This program is a lab-based, hands-on course that will explore the work of forensic scientists. Recent advances in scientific methods and principles have had an enormous impact upon law enforcement and the entire criminal justice system. Students will learn how forensic scientists collect and document physical evidence, conduct laboratory analysis, and present results during testimony in a court of law. Laboratory exercises will include learning techniques commonly employed in forensic investigations. The program will examine actual case histories of crimes and requires students to apply basic understandings of physics, chemistry, biology, psychiatry, math, and more to reveal the whole story of a crime. Students who successfully complete the Forensic Science program will be prepared to excel in a two- or four-year post-secondary Criminal Justice or Forensics program.

Course Description

This is the second course in the Forensic Science pathway. In this course, students will continue to develop their forensic science skills as they learn about more advanced crime scene investigation procedures and the probative value of evidence. They will be able to differentiate between class evidence and individual evidence as they collect and analyze hair evidence and fingerprints and other physical evidence such as skeletal and dental remains, and impression evidence and blood serology. Students will participate in creating and conducting an independent research project for the Science Fair. Student will also explore criminal justice issues in their community through crime mapping and participate in a final crime scene technician simulation to apply the skills they have learned.

Work-Based Learning

Students will be connected with professionals in the forensic science field through field trips, job shadowing and Career Coaching, leading to opportunities for direct job training and real-world experience. Students will create and maintain a portfolio of their experiences to document the development of their skills, including a professional resume.

Pre-Requisites

CSI100: Forensic Science 100

Course Objectives

Students will:

1. Describe the probative value of evidence.
2. Differentiate between class and individual evidence.
3. Use evidence to identify an individual.
4. Explain and demonstrate correct techniques to collect and package crime scene evidence.
5. Engage in argument from evidence.
6. Explain the professional, legal, and ethical responsibilities of forensic science professionals.
7. Perform comparative analysis on fingerprints, hair, skeletal and dental remains, impressions, and blood.
8. Plan and carry out an independent research project.
9. Research and address issues of crime in the community.

Integrated Academics

1 CTE Integrated Science Credit

Concurrent Enrollment College Credit

N/A

Equipment and Supplies

- **School will provide:** Textbook, laptop and all lab materials
- **Student will provide:** 3-ring binder, composition lab book, notebook paper, pencil, pen, earbuds or headphones

Textbooks

Brown, R., & Davenport, J. (2016). *Forensic Science: Advanced Investigations.* Boston, MA: Cengage Learning.
Saferstein, R. (2014). *Criminalistics: An Introduction to Forensic Science, 11th Edition.* New York: Pearson.
Spencer, J. T. (2012). *Introduction to Forensic Science: The Science of Criminalistics.* Boston, MA: Cengage Learning.

Grading

25% **Tests and Quizzes:** Tests include all summative assessments (written exams, projects, authentic products, presentations, etc.) Quizzes will cover the most recent material and review of important concepts.

25% **Labs:** Labs are often performed in groups of 2-4 students. ALL lab work will be collected and curated in a composition notebook. Lab reports will require group collaboration and individual work and some formal lab reports will be typed.

25% **Projects**

25% **Classwork:** Most work will be completed in class. Homework will mainly consist of work from absences.

These percentages are estimates, and subject to change based on the nature of the students involved and the class itself.

Additional Course Policies

- **Assignments:** In order to receive full credit, work must be complete before the bell rings on the day it is due. Late or incomplete work is NOT accepted for full credit. If an absence is excused, students will have as many days as they were absent to make up missed work. Absences make it very difficult to keep up with the coursework. Some work may not be possible to make-up due to the nature of activity (bellringers, labs, class discussions, etc.). See teacher with questions. It the students' responsibility to organize and keep track of their assignments! Most work will be turned in as a packet at the end of a unit or electronically via email or other means.
- **Labs:** Most lab work will be collected in a composition notebook. Labs will be performed in groups. Lab reports will require group collaboration and will require use of computer technology.
- **Lab Safety:** In case an accident occurs, report it immediately! Let the instructors decide on the proper course of action. Those not involved should clear the area.
- **Exams:** It is the student's responsibility to schedule with the teacher to make up a missed test/quiz for any excused absence within the week following their return. Students with an unexcused absence on the day of an exam will NOT be able to make up the exam or quiz. Students may retake quizzes if they show completed homework. Quiz and test dates will be announced 2 days and 5 days in advance, respectively.
- **Academic Integrity Policy:** Students are expected to behave ethically and with integrity. Academic dishonesty (including letting others copy) will result in no credit for the assignment and may include a meeting between the student, parent/guardian and an administrator. Please refer to school policies for more information on this policy. Please give help and hints, but not answers.

Course Calendar

Quarter	Units of Study
1	• Forensic Science Skills • Probative Value of Evidence • Crime Scene Investigation Procedures • Historical Foundations of Forensic Science
2	• Class Evidence: Hair Analysis • Individual Evidence: Fingerprints • Physical Evidence: Skeletal Remains and Forensic Dentistry
3	• Science Fair • Impression Evidence • Serology: Blood Typing
4	• Crime Mapping and Criminal Justice Issues • Crime Scene Technician Simulation • Portfolio

Syracuse City School District
Career and Technical Education Program
Scope and Sequence
CSI200: Forensic Science 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 **Forensic Science Skills**	• What are the expectations of this class? • Why is lab safety vital in science?	• Demonstrate safe practices in labs and field investigations. • Write a claim and support with evidence. • Exhibit appropriate behavior in the lab. • Perform the steps of laboratory protocols accurately and in sequence. • Follow standard operating procedures for maintaining a lab manual following the steps of the scientific method (objectives, material, procedures, data/results, and conclusion).	• Building Rules: Qualities of a Good/ Bad Teacher, Student • Annotation: Rose that Grew from Concrete • Summary Tweet: Rose that Grew from Concrete • Vocabulary Presentation: Forensic Science Disciplines • Google Presentation Slide: Lab Safety • Set-Up Composition Lab Notebook • Lab: Ooblek-Is it a Solid or Liquid? Claim-Evidence-Reason • Uniform inspection • Professional Email Account	**Career Ready Practices** CRP 1,3,4,5,9,11,12 **Cluster Standards** HL 1,2,3 LW 1,3,5,6 ST 2,3,4,5,6 **Pathway Standards** HL-BRD 1,6 LW-ENF 1,4,5,6,12 ST-SM 3	**ELA** 9-10R 1,2,4,7,8,9 9-10W 1,2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,3,4,5,6,7,8 9-10WHST 1,2,4,5,6,7 **Math** MP 5 **Science** NGSSP 3 HS-PS1-3
Weeks 3-5 **Probative Value of Evidence**	• What is legally and ethically expected of forensic scientists and crime scene investigators? • How can scientific methods help solve problems?	• Identify and describe the CSI Effect. • Explain how science is used to solve crimes. • Describe the importance of physical evidence. • Explain how evidence is used to convince a jury of guilt. • Describe the probative value of evidence. • Differentiate between class and individual evidence. • Use evidence to identify an individual. • Demonstrate appropriate use of personal protective devices and proper glove disposal technique.	• Close Reading: CSI Effect • Summary: CSI Effect • Anticipation Guide: Criminal Justice System • Close Reading: “Six Astonishing Mistakes that will Make you Rethink the Death Penalty” • Notes: Crime Science • Lab: Class vs Individual Evidence • Lab: Garbage-ology • Presentation: Suspect Identification • Guest Speaker: Evidence, CSI Effect	**Career Ready Practices** CRP 1,3,4,5,9,11,12 **Cluster Standards** HL 1,2,3 LW 1,3,5,6 ST 2,3,4,5,6 **Pathway Standards** HL-BRD 1,6 LW-ENF 1,4,5,6,12 ST-SM 3	**ELA** 9-10R 1,2,4,7,8,9 9-10W 1,2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,3,4,5,6,7,8 9-10WHST 1,2,4,5,6,7 **Math** **Science** HS-ETS1-2
Weeks 6-8 **Crime Scene Investigation Procedures**	• How is evidence collected and analyzed? • What is the value of evidence? • What procedures are implemented at a crime scene and why are they important?	• Work as a productive member of a team. • State and describe the steps in processing a crime scene. • Demonstrate crime scene sketching. • Measure the boundaries of a crime scene. • Reconstruct a crime scene from pieces of evidence.	• Scenarios: Process Crime Scene Mistakes • Lab: Trace Evidence Lab • Lab: Chain of Custody • Lab: Crime Scene Sketch Reconstruction • Ethical Case Studies Scenarios: Crime Scene Processing Mistakes	**Career Ready Practice** CRP 1,2,4,8,9,11,12 **Cluster Standards** HL 3 LW 3 ST 1,2 **Pathway Standards** HL-BRD 1	**ELA** 9-10R 1,2,4,7,8,9 9-10W 1,2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,3,4,5,6,7,8 9-10WHST 1,2,4,5,6,7 **Math** MP 1,2,4,5,6

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
	• What is legally and ethically expected of forensic scientists and Crime Scene Investigators?	• Explain and demonstrate correct techniques to collect and package crime scene evidence. • Demonstrate proper handling of evidence and chain of custody documentation.		LW-ENF 1,4,12 ST-SM 2,3	**Science** NGSSP 1,2,5,6,7,8 HS-ETS1-2
Weeks 9-10 **Historical Foundations of Forensic Science**	• How has forensic science developed over time? • What is a crime scene lab and how does it work?	• Describe the legal responsibilities of forensic science professionals within and outside of the courtroom. • Illustrate the history of forensic science. • Summarize what a crime lab is and how it works. • Explain J. Edgar Hoover's contributions to the formation of the FBI. • Describe the federal programs established in the United States to investigate crimes (Homeland Security, INTERPOL, ATF, FBI, US Attorney General, U.S. Marshal's Service). • Prepare a mission and vision statement for a police agency or crime lab. • Explain the organization of the crime laboratory and detail the functions it serves. • Compare and contrast a crime lab from another jurisdiction (state, county, city).	• Infographic: Criminal Justice System • History of Forensic Science Prezi • Movie Notes: History Channel-FBI Crime Lab • Venn Diagram: Organization of Crime Lab • Case Study: Halloween History Horror	**Career Ready Practice** CRP 1,2,4,7 **Cluster Standards** HL 1 LW 1,5 ST 4 **Pathway Standards** HL-BRD 1,6 LW-ENF 1,4,5,6 ST-SM 2,3	**ELA** 9-10R 1,2,4,7,8,9 9-10W 1,2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,3,4,5,6,7,8 9-10WHST 1,2,4,5,6,7 **Math** **Science**
Weeks 11-13 **Class Evidence: Hair Analysis**	• How are microscopes used in forensic science? • How is hair evidence analyzed and used in investigations?	• Identify parts and functions of a microscope. • Use a microscope effectively in the lab setting. • Competently focus a compound microscope. • Prepare slides of hair evidence and cuticle impressions. • Sketch detailed views of objects as seen through a microscope. • Identify hair structures: medulla, cortex, cuticle, cortical fuci, pigment granules and ovoid bodies. • Identify different medulla and cuticle patterns using a microscope.	• Lab: Microscope Structure Identification • Paper Bindle: Collect Trace Evidence in the Field • Activity: Hair Impression Slides • Notes: Identify Hair Structures • Venn Diagram: Animal vs Human Hair • Lab: Animal and Human hair Comparison • Lab: Identify an unknown hair • Activity: Categorizing somatic and racial differences • Lab: Characteristics of Hair Scales Lab • Activity: Teach a Hair Lesson • Activity: Murder in the Hair Salon	**Career Ready Practice** CRP 2,8,11,12 **Cluster Standards** HL 1 LW ST 1,2,6 **Pathway Standards** HL-BRD LW-ENF 1,5 ST-SM 1,2,4	**ELA** 9-10R 1,2,4,7,8,9 9-10W 1,2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,3,4,5,6,7,8 9-10WHST 1,2,4,5,6,7 **Math** MP 1,2,5,6 **Science** NGSSP 1,2,3,7,8 HS-ETS1-2

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
		• Differentiate between animal and human hair. • Identify species that hair originated from. • Summarize the importance of the presence of DNA in analyzing hair evidence. • Identify signs of violence shown by hair evidence. • Describe how to determine natural vs. dyed hair, cut vs. uncut hair. • Give examples of how chemical analysis of hair can provide clues in a crime such as in a poisoning, heavy metal exposure, drug use or nutritional issues. • Identify the racial and somatic origin of unknown hairs based on their characteristics.	• Light Diffraction Hair Diameter Lab		
Weeks 14-16 **Individual Evidence: Fingerprints**	• How and when was the science of fingerprints discovered? • What are the requirements for a quality set of fingerprints? • What are different methods of developing Fingerprints? • How do they develop fingerprints that may not be visible?	• Describe the history of fingerprinting. • Describe the structure and function of the skin. • Explain how ridge patterns are caused in skin. • Compare the three major fingerprint patterns of arches, loops, and whorls, and their respective subclasses. • Describe the fingerprint minutiae (major characteristics of fingerprints): ending ridge, fork, island ridge, dot, bridge, spur, eye, double bifurcation, delta, trifurcation. • Explain the importance of the Locard Exchange Principle in forensic science. • Apply proper procedures for dusting a crime scene for collecting latent fingerprints. • Demonstrate the ability to properly lift and mount a latent fingerprint from a designated item of evidence. • Demonstrate the proper procedure for marking a latent fingerprint card. • Determine if a fingerprint matches a fingerprint on record.	• Fingerprint Minutiae Notes • Lab: Fingerprint Comparison Analysis • Lab: Magnetic Powder Dusting • Activity: History of Fingerprinting Timeline • Project: Fingerprint Minutiae Model • Activity: Fingerprint Lifting Digital SKILLS USA Lesson (blog, podcast, video) • Fingerprinting Privacy and Identification Op-Ed (IAFIS)	**Career Ready Practice** CRP 2,8,11 **Cluster Standards** HL 1 LW 2 ST 2,6 **Pathway Standards** HL-BRD 6 LW-ENF 1,6,12 ST-SM 2,4	**ELA** 9-10R 1,2,4,7,8,9 9-10W 1,2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,3,4,5,6,7,8 9-10WHST 1,2,4,5,6,7 **Math** MP 1,3,5 **Science** NGSSP 1,2,3,6,7,8 HS-LS1-2

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
		• Analyze the privacy and security trade-offs of using fingerprinting identification in society.			
Weeks 17-20 **Physical Evidence: Skeletal Remains and Forensic Dentistry**	• How are physical remains identified? • What are characteristics of physical evidence and remains?	• Describe how teeth are used in forensic identification. • Name and number deciduous (baby) and permanent teeth. • Employ dentition patterns as a means for bite mark identification. • Compare and contrast bite mark patterns antemortem and postmortem. • Describe the use of forensic dentistry in regards to mass disasters and body identification.	• Case Study: 9/11 Forensic Science Dentistry Identification • Lab: Odontology Identification Bite Mark Impression Lab • Case Study: Ted Bundy • Teeth analysis • Odontology lab with radiographs and teeth molds	**Career Ready Practices** CRP 2,4,8,10,11 **Cluster Standards** HL 1 LW 1,2,4 ST 2, 6 **Pathway Standards** HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**ELA** 9-10R 1,2,4,7,8,9 9-10W 1,2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,3,4,5,6,7,8 9-10WHST 1,2,4,5,6,7 **Math** MP 1,3,5 **Science** HS-LS1-2
Weeks 21-26 **Science Fair**	• How do forensic scientists plan and carry out investigations? • How do forensic scientists construct explanations and design solutions?	• Create an experimental research question. • Write a hypothesis to test a research question. • Use credible sources to compile background research on a topic. • Outline and draft a background research paper. • Write a testable hypothesis statement. • Construct an experimental design (with the independent, dependent, and control variables) to test a hypothesis. • Create a data table to collect quantitative and qualitative data. • Create a graph to display quantitative data. • Analyze data for patterns and trends. • Draft conclusions from data to support or abandon hypothesis and explain results. • Prepare a research presentation display board. • Present research conclusions to a public audience. • Reflect on and revise work.	• Brainstorm Activity • Research Plan and Project Proposal Conference • Credible Source Pyramid and Analysis • Activity: Research Notes • Research Background Writing Outline • Science Fair Journal Reflection • Lab: Conduct Research Experiment • Collect and Display Data in Graph form • Analyze data and summarize conclusions • Project: Science Fair Display Board • Science Fair Poster Presentation (PSLA Science Fair, CTE Expo, MoST Science Fair)	**Career Ready Practice** CRP 2,4,6,7,8,11,12 **Cluster Standards** HL 1,2,3 LW 1,3,5,6 ST 2,3,4,5,6 **Pathway Standards** HL-BRD 1,6 LW-ENF 1,4,5,6,12 ST-SM 3	**ELA** 9-10R 1,2,4,7,8,9 9-10W 1,2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6 **Literacy** 9-10RST 1,2,3,4,5,6,7,8 9-10WHST 1,2,4,5,6,7 **Math** MP 1,2,3,4,5,6,7,8 **Science** NGSSP 1,3,4,5,6,7,8 HS-ETS1-1,1-2,1-3
Weeks 27-30 **Impression Evidence**	• How do crime scene investigators examine tool mark	• Explain the individual characteristics of tool marks.	• Toolmark Analysis Experiment	**Career Ready Practice** CRP 2,4,6,8,11,12	**ELA** 9-10R 1,2,4,7,8,9 9-10W 1,2,5,6,7 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
	impressions, bullet fragments, and bullet holes?	• Identify characteristics of bullet and cartridge cases. • Explain laboratory methodologies used to determine whether an individual has fired a weapon, such as identifying gunshot residue. • Describe the type of information available through the National Integrated Ballistics Information Network.	• Firearms and Trajectory Activity: Inquiry Lab: Marshmallow Shooters Testing • Firearms and Tool Marks Examination • Case Studies: JFK, Oscar Pistorius • Frontline: Ring of Fire- The Crisis of American Made Handguns • Ballistics NOVA: Who Shot JFK?		9-10L 1,2,3,4,5,6
				Cluster Standards HL 1 LW ST 1,2,6	**Literacy** 9-10RST 1,2,3,4,5,6,7,8 9-10WHST 1,2,4,5,6,7
				Pathway Standards HL-BRD LW-ENF 1,5 ST-SM 1,2,4	**Math** MP 2,3,4,5,7
					Science NGSSP 1,2,3,4,6,7,8 HS-1LS3-1,3-3
Weeks 31-33 **Serology: Blood Typing**	• What is serology and how is it used to solve crimes?	• Identify the components and chemical properties of blood. • List the components of blood. • Identify the antigens and antibodies that determine ABO blood types and the Rh factor. • Use a Punnett Square to determine blood type probabilities. • Apply the use of a Punnett Square to solve paternity questions.	• Blood Basics Notes • Lab: Who's the Daddy? Blood Type Laboratory • Punnett Square Blood Type Activity • Blood Quiz	**Career Ready Practice** CRP 2,4,8,11,12	**ELA** 9-10R 1,2,4,7,8,9 9-10W 1,2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards HL 1 LW ST 1,2,6	**Literacy** 9-10RST 1,2,3,4,5,6,7,8 9-10WHST 1,2,4,5,6,7
				Pathway Standards HL-BRD LW-ENF 1,5 ST-SM 1,2,4	**Math** MP 2,3,4,5,7
					Science NGSSP 1,2,3,4,6,7,8 HS-1LS3-1,3-3
Weeks 34-37 **Crime Mapping and Criminal Justice Issues**	• What is a crime mapping? • What is GIS? • What crimes occur in our community? • How do forensic scientists develop and use models? • How do forensic experts obtain, evaluate and communicate information?	• Identify methods for measuring crime. • Interpret a topographical map. • Read a compass. • Identify relevant issues in the community. • Design and carry out a service project to address a community need.	• NAMIS: Missing Persons Search • Current Events Summary Blog/Newspaper Article • Twitter Map • Co-Curricular GIS Map creation • Service Project	**Career Ready Practice** CRP 2,4,5,6,7,8,11,12	**ELA** 9-10R 1,2,4,7,8,9 9-10W 1,2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards HL 1,2,3 LW 1,3,5,6 ST 2,3,4,5,6	**Literacy** 9-10RST 1,2,3,4,5,6,7,8 9-10WHST 1,2,4,5,6,7
				Pathway Standards HL-BRD 1,6 LW-ENF 1,4,5,6,12 ST-SM 3	**Math** MP 1,2,3,4,5,6,7,8
					Science NGSSP 1,2,3,4,5,6,7,8
Weeks 38-40 **Crime Scene Technician Simulation** **Portfolio**	• What have you learned this year? • What is the role of a crime scene investigator?	• Work as a member of team. • Work in cross-curricular groups. • Compile accomplishments in a resume. • Write a cover letter. • Explore and identify various fields of expertise in forensic science.	• Practical Exam: Crime Scene Scenario • Portfolio: Resume, Cover Letter • Presentation • Interview of professional working in the field of forensic science	**Career Ready Practice** CRP 1,2,3,4,5,9,10,11,12	**ELA** 9-10R 1,2,4,7,8,9 9-10W 1,2,5,6,7 9-10SL 1,2,3,4,5,6 9-10L 1,2,3,4,5,6
				Cluster Standards HL 3 LW 3 ST 1,2	**Literacy** 9-10RST 1,2,3,4,5,6,7,8 9-10WHST 1,2,4,5,6,7
				Pathway Standards	**Math**

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
		• Describe the different education and training requirements for the various careers in forensic science.		HL-BRD 1 LW-ENF 1,4,12 ST-SM 3	MP 1,2,3,4,5,6,7,8 **Science** NGSSP 1,3,4,5,6,7,8

Syracuse City School District
Career and Technical Education Program
Course Syllabus
CSI300: Forensic Science 300

Program Overview

Forensic Science is the application of scientific methods and techniques to gather and examine information which is used in a court of law. This program is a lab-based, hands-on course that will explore the work of forensic scientists. Recent advances in scientific methods and principles have had an enormous impact upon law enforcement and the entire criminal justice system. Students will learn how forensic scientists collect and document physical evidence, conduct laboratory analysis, and present results during testimony in a court of law. Laboratory exercises will include learning techniques commonly employed in forensic investigations. The program will examine actual case histories of crimes and requires students to apply basic understandings of physics, chemistry, biology, psychiatry, math, and more to reveal the whole story of a crime. Students who successfully complete the Forensic Science program will be prepared to excel in a two- or four-year post-secondary Criminal Justice or Forensics program.

Course Description

This is the third course in the Forensic Science pathway. This course provides an overview of the criminal justice system and introduces specialized forensic topics including the U.S. justice system, and the history and role of forensic science in the legal system. As part of this course, students will be enrolled in CRJ 101: Criminal Justice Systems at Onondaga Community College which includes study of police, the court system, the correctional systems, and other discretionary and ethical issues in the criminal justice field. Students will participate in creating and conducting an independent research project for the Science Fair. Students will refine their knowledge and skills as they learn more advanced crime scene investigation techniques, such as crime scene photography, fiber analysis, and the identification of physical remains. Students will examine the role of forensic pathologists in forensic science and how the areas of toxicology, forensic psychology, and forensic ecology are applied in criminal investigations. Finally, students will participate in a mock court simulation to apply the skills they have learned

Work-Based Learning

Students will be connected with professionals in the forensic science field through field trips, job shadowing and Career Coaching, leading to opportunities for direct job training and real-world experience. Students will create and maintain a portfolio of their experiences to document the development of their skills, including a professional resume.

Pre-Requisites

CSI100: Forensic Science 100, and CSI200: Forensic Science 200

Course Objectives

Students will:

10. Explain the legal foundations for criminal justice in the United States.
11. Explain the professional, legal, and ethical responsibilities of Forensic Science professionals.
12. Document and process evidence from a crime scene.
13. Perform comparative analysis on fiber evidence and human remains.
14. Engage in argument from evidence.
15. Explain the role that pathologists play in forensic science
16. Describe the fields of toxicology, forensic psychology and forensic ecology.
17. Plan and carry out an independent research project.

Integrated Academics

1 Integrated Science Credit

Concurrent Enrollment College Credit

Upon successful completion of Forensic Science 300, students will earn 3 college credits for CRJ 101: Criminal Justice Systems from Onondaga Community College.

Equipment and Supplies

- **School will provide:** Textbook, laptop and all lab materials
- **Student will provide:** 3-ring binder, composition lab book, notebook paper, pencil, pen, earbuds or headphones

Textbooks

Brown, R., & Davenport, J. (2016). *Forensic Science: Advanced Investigations.* Boston, MA: Cengage Learning.
Saferstein, R. (2014). *Criminalistics: An Introduction to Forensic Science, 11th Edition.* New York: Pearson.
Spencer, J. T. (2012). *Introduction to Forensic Science: The Science of Criminalistics.* Boston, MA: Cengage Learning.

Grading

25% **Tests and Quizzes:** Tests include all summative assessments (written exams, projects, authentic products, presentations, etc.) Quizzes will cover the most recent material and review of important concepts.
25% **Labs:** Labs are often performed in groups of 2-4 students. ALL lab work will be collected and curated in a composition notebook. Lab reports will require group collaboration and individual work and some formal lab reports will be typed.
25% **Projects**
25% **Classwork:** Most work will be completed in class. Homework will mainly consist of work from absences.
These percentages are estimates, and subject to change based on the nature of the students involved and the class itself.

Additional Course Policies

- **Assignments:** In order to receive full credit, work must be complete before the bell rings on the day it is due. Late or incomplete work is NOT accepted for full credit. If an absence is excused, students will have as many days as they were absent to make up missed work. Absences make it very difficult to keep up with the coursework. Some work may not be possible to make-up due to the nature of activity (bellringers, labs, class discussions, etc.). See teacher with questions. It the students' responsibility to organize and keep track of their assignments! Most work will be turned in as a packet at the end of a unit or electronically via email or other means.
- **Labs:** Most lab work will be collected in a composition notebook. Labs will be performed in groups. Lab reports will require group collaboration and will require use of computer technology.
- **Lab Safety:** In case an accident occurs, report it immediately! Let the instructors decide on the proper course of action. Those not involved should clear the area.
- **Exams:** It is the student's responsibility to schedule with the teacher to make up a missed test/quiz for any excused absence within the week following their return. Students with an unexcused absence on the day of an exam will NOT be able to make up the exam or quiz. Students may retake quizzes if they show completed homework. Quiz and test dates will be announced 2 days and 5 days in advance, respectively.
- **Academic Integrity Policy:** Students are expected to behave ethically and with integrity. Academic dishonesty (including letting others copy) will result in no credit for the assignment and may include a meeting between the student, parent/guardian and an administrator. Please refer to school policies for more information on this policy. Please give help and hints, but not answers.

Course Calendar

Quarter	Units of Study
1	• Safety and Career Readiness • Legal Foundations of the US Justice System • The CSI Effect • Technical Integrity of the Investigation
2	• Fiber Evidence and Analysis • Identification of Physical Evidence and Remains • Mortality: Investigation of Various Aspects of Death • Toxicology • Science Fair
3	• CRJ 101: Criminal Justice Systems: Police, Courts, Corrections, Individual Rights vs. Public Order, Due Process • CRJ 101: Criminal Justice Systems: Discretionary and Ethical Issues
4	• Forensic Psychology • Forensic Ecology: Soil Analysis and Water Testing • Mock Court

Syracuse City School District
Career and Technical Education Program
Scope and Sequence
CSI300: Forensic Science 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
Week 1 **Safety and Career Readiness**	• What are the professional, industry and academic skills required in the forensic science field?	• Exhibit appropriate behavior in the lab. • Explain the dangers of evidence contamination through food, drink, cosmetics, lotion, eye drops, and contact lenses. • Use laboratory equipment correctly and safely. • Follow laboratory procedures. • Follow standard operating procedures for maintaining a lab manual. • Document laboratory work following the steps of the scientific method (objectives, material, procedures, data/results, and conclusion).	• Ground Zero Flag Mystery Summary • American Flag Identification Lab • Uniform inspection • Goal setting and reflection journaling • Composition Lab Notebook	**Career Ready Practices** CRP 2,4,5,6,8,10,11 **Cluster Standards** HL 5 LW 5 ST 4 **Pathway Standards** HL-BRD 6 LW-ENF 1,5,6 ST-SM 3,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** MP 5 **Science** NGSSP 3 HS-ETS1-2
Weeks 2-3 **Legal Foundations of the US Justice System**	• What are the legal foundations for criminal justice in the United States? • How is the criminal justice system organized?	• Identify the constitutional rights of individuals within US Justice System. • Examine how the First Amendment relates to commercial speech and the rights of private citizens. • Explain the protections from illegal search and seizure outlined in the Fourth Amendment. • Explain the due process and equal protection clauses in the Fifth and Fourteenth Amendments. • Describe rights protected by the Ninth Amendment. • Outline the steps of the judicial process from identification of a suspect through the trial. • Explain how evidence is used to convince a jury of guilt.	• First Amendment Game • iCivics • First Amendment Cartoon • Tinker Precedent Case: Amicus Curie Legal Brief • Miranda Case Study • Forensic Professional Ethics Scenarios • Bill of Rights Posters • Court and Booking Field Trip • Court Case Reflection	**Career Ready Practices** CRP 2,4,5,6,8,10,11 **Cluster Standards** HL 5 LW 5 ST 4 **Pathway Standards** HL-BRD 6 LW-ENF 1,5,6 ST-SM 3,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** MP 5 **Science** NGSSP 3
Weeks 4-7 **The CSI Effect**	• How is forensic science portrayed in the media? • Where are the intersections of forensic science and the law?	• Evaluate the importance of a code of ethics to professional organizations. • Explain how forensic science relies on multiple disciplines to solve crimes. • Differentiate, identify and provide examples of infractions, misdemeanors, and felony crimes. • Summarize how forensic science is portrayed in literature, media and society.	• Serial Podcast Notes • Podcast/Blog Creation: Forensics Media Review of Serial/Concussion/CSI • Movie: 48 Hours: Casey Anthony Judgement Day • Summary: Casey Anthony Trial • Analysis: Case Anthony Evidence	**Career Ready Practices** CRP 2,4,6,8,10,11 **Cluster Standards** HL 1,5 LW 1, 5,6 ST 4,5,6 **Pathway Standards** HL-BRD 6	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** CCSM 1,2,4-6

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
		• Compare and contrast fictional detectives and modern forensic scientists. • Explain the CSI Effect and analyze how has it influenced scientific evidence in the courtroom.	• Draft Legal Argument: Casey Anthony Verdict Claim-Evidence-Reason Graphic Organizer • Mock Court: Casey Anthony	LW-ENF 1,5,6,10 ST-SM 2,3,4	**Science** NGSS 1,2,6,7
Weeks 8-10 **Technical Integrity of the Investigation**	• What is the value of evidence? • What procedures are implemented at a crime scene and why are they important? • What are the legal responsibilities of forensic scientists?	• Demonstrate or explain activities that occur prior to conducting a crime scene search. • Explain and demonstrate the use of constitutional law and federal rules of evidence governing search and seizure. • Explain and demonstrate appropriate search pattern methods. • Explain and demonstrate proper bagging and marking of all evidence. • Draw a crime scene sketch using proper measurements, symbols and labels. • Demonstrate proper use of measurements and conversions to draw a crime scene to scale. • Geometrically triangulate evidence. • Demonstrate how to prepare an evidence inventory. • Work together as a professional team to conduct a crime scene investigation. • Demonstrate professional bearing and demeanor. • Produce quality photographs of crime scenes including a photography log. • Simulate ethically challenging forensic scenarios. • Describe the legal and ethical responsibilities of forensic science professionals within and outside of the courtroom.	• Locard Sock Lab • Lab: Triangulate evidence • Crime Scene Reconstruction: O.J. Simpson • Movie Notes: A&E American Justice: Why O.J. Simpson Won • Analysis of forensic mistakes during O.J. Simpson trial • Skills USA Crime Scene competition practice simulation	**Career Ready Practices** CRP 2,4,8,11,12	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards HL 5 LW 4,5 ST 2,6	**Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7
				Pathway Standards HL-BRD 2,4 LW-ENF 1,4,5,6,10,12 ST-SM 1,2,4	**Math** MP 2,3,4,5,7
					Science NGSSP 1,2,3,4,6,7,8 HS-ETS1-2
Weeks 11-12 **Fiber Evidence and Analysis**	• How is fiber evidence from a crime scene analyzed?	• Examine and analyze the forensic aspects of fibers. • Identify and compare natural and synthetic fiber types by using physical and chemical testing methods. • Summarize systematic procedures for collection and identification of fiber evidence.	• Fluorescence Fiber Identification • Lab: Observing Refractive Index (RI) in Fibers • Lab: Light Diffraction Fiber Diameter • Lab: Fiber Burn Test • Lab: Fiber Dye Test	**Career Ready Practices** CRP 2,4,8,11	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards HL 1 LW 2,4 ST 2,6	**Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7
				Pathway Standards HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**Math**
					Science HS-PS4-1

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 13-15 **Identification of Physical Evidence and Remains**	• What is forensic anthropology and what can it tell us about human remains? • What is forensic radiology?	• Identify the basic bones of the skeleton. • Use skeletal remains to determine the physical characteristics of an individual. • Determine the sex of an individual based on skull, jaw, brow ridge, pelvis, and femur. • Determine the ancestry of an individual. • Estimate the age of an individual. • Estimate the height, build, and handedness of an individual. • Identify injuries, bone diseases, and possible causes of death using bone characteristics. • Compare and contrast pre and postmortem bone injuries. • Identify bone patterns indicating disease. • Identify bone markings that could indicate cause of death.	• Lab: Who Is The Skeleton in the Closet? • Lab: One Bite Out of Crime Forensic Odontology • Lab: Bone Identification • Skeleton Foldable Notes • Bone Quiz • Skull Diagram • Lab: Estimate Age and Gender of Unknown Skeleton	**Career Ready Practices** CRP 2,4,8,10,11 **Cluster Standards** HL 1 LW 1,2,4 ST 2,6 **Pathway Standards** HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** MP 1,3,5 **Science** NGSSP 1,2,3,6,7,8 HS-LS1-2,1-3
Weeks 16-18 **Mortality: Investigation of Various Aspects of Death**	• What role do pathologists play in forensic science? • What is forensic pathology?	• Analyze the role of forensic pathologists in investigations. • Describe correct anatomical positions and the role it plays in human anatomy. • Describe anatomical position. • Apply body planes and directional terms related to the body. • Locate the body cavities, quadrants, and body regions and identify the major organs within each. • Define and list manners and methods of death. • Follow the steps of an autopsy procedure. • Determine the cause of death using evidence from an autopsy. • Identify the stages of decomposition to determine approximate time of death. • Compare and contrast algor mortis, rigor mortis, and livor mortis. • Identify common insects associated with decomposition and diagram their life cycles. • Identify various environmental factors related to time of death.	• Foldable: Body Planes and Cavities • Lab: Pickle Autopsy • Lab: Measurable You Inquiry • Movie Notes: And the Dead Shall Speak • Lab: Forensic Entomology • Lab: Body Farm Inquiry • Rwanda Genocide Case Study	**Career Ready Practices** CRP 2,4,8,10,11 **Cluster Standards** HL 1 LW 1,2,4 ST 2,6 **Pathway Standards** HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** MP 1,3,5 **Science** NGSSP 1,2,3,6,7,8 HS-LS1-2
Week 19-20 **Toxicology**	• What are the adverse effects of drugs? • How are the most common poisonings investigated?	• Identify the parts of the circulatory system. • Identify the parts of the digestive system. • Identify the parts of the urinary system. • Compare and contrast laboratory procedures used for measuring the concentration of alcohol in the bloodstream.	• Body System Foldable Shirts • Drug Project • Public Health Campaign • Video Notes: Grim Murders in History-Poison • Making of Medicine Video	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** HL 1 LW 2,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7

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
		• Describe techniques used to measure the blood alcohol content (BAC). • Classify the five schedules of drugs according to the effects that they have on the body. • Relate the signs and symptoms of an overdose and poisoning with a specific class of drugs or toxins. • Identify chemical agents that may be used for bioterrorism. • Compare and contrast methods used to collect and package drug evidence.		ST 2,6 **Pathway Standards** HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**Math** CCSM 1,3,5 **Science** NGSS 1,2,3,6,7,8 HS-LS1-2,1-3
Weeks 21-30 **M/W/F** **Science Fair**	• How do forensic Scientists plan and carry out investigations? • How do forensic Scientists construct explanations and design solutions?	• Create an experimental research question. • Write a hypothesis to test a research question. • Use credible sources to compile background research on a topic. • Outline and draft a background research paper. • Write a testable hypothesis statement. • Construct an experimental design (with the independent, dependent, and control variables) to test a hypothesis. • Create a data table to collect quantitative and qualitative data. • Create a graph to display quantitative data. • Analyze data for patterns and trends. • Draft conclusions from data to support or abandon hypothesis and explain results. • Prepare a research presentation display board. • Present research conclusions to a public audience. • Reflect and revise work.	• Brainstorm Activity • Research Plan and Project Proposal Conference • Credible Source Pyramid and Analysis • Activity: Research Notes • Research Background Writing Outline • Science Fair Journal Reflection • Lab: Conduct Research Experiment • Collect and Display Data in Graph form • Analyze data and summarize conclusions • Project: Science Fair Display Board • Science Fair Poster Presentation (PSLA Science Fair, CTE Expo, MoST Science Fair)	**Career Ready Practice** CRP 2,4,6,7,8,11,12 **Cluster Standards** HL 1,2,3 LW 1,3,5,6 ST 2,3,4,5,6 **Pathway Standards** HL-BRD 1,6 LW-ENF 1,4,5,6,12 ST-SM 3	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** MP 1,2,3,4,5,6,7,8 **Science** NGSSP 1,3,4,5,6,7,8 HS-ETS1-1,1-2,1-3
Weeks 21-22 **T/Th** **Police** **(Onondaga Community College CRJ 101 Criminal Justice Systems)**	• How do police accomplish their goals within the framework of the U.S. Criminal Justice system?	• Identify components and levels of police agencies in the U.S. • Describe state, federal, and local law enforcement agencies and their interaction with each other. • Explain the role of police in the initial response and throughout the criminal justice process. • Describe the history of policing in the U.S., and consider the role of police departments in a democracy.	• Chapter quizzes • Chapter summaries • Current events report of the week • Crime Cause Analysis Research Essay	**Career Ready Practices** CRP 1,2,4,12 **Cluster Standards** LW 4 **Pathway Standards** LW-ENF 1,5	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** **Science**

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
		• Survey duties assigned to local, state and federal law enforcement agencies. • Assess the role of private law enforcement agencies.			
Weeks 23-24 **T/Th** **Courts** **(OCC CRJ 101)**	• What levels of courts exist in the U.S. Criminal Justice system? • What roles exist in each level of the court system?	• Explain the right of due process and the sixth amendment to the U.S. Constitution. • Describe how the courts in the U.S. Criminal Justice System work as a check and balance for our government. • Explain the function of interpreting laws for the courts and give examples of it. • Describe how the courts shape the laws.	• Chapter quizzes • Chapter summaries • Current events report of the week • Mock Court Trial	**Career Ready Practices** CRP 1,2,4,12	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards LW 4	**Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7
				Pathway Standards LW-ENF 1,5	**Math**
					Science
Weeks 25-26 **T/Th** **Corrections** **(OCC CRJ 101)**	• What is a jail? • What is prison? • What are probation and parole? • How does corrections support police and courts in the Criminal Justice system?	• Identify levels of corrections in the U.S. Criminal Justice system. • Describe prison culture. • Describe recidivism and statistics that help shape sentencing. • Describe the similarities and differences between probation and parole.	• Chapter quizzes • Chapter summaries • Current events report of the week	**Career Ready Practices** CRP 1,2,4,12	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards LW 4	**Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7
				Pathway Standards LW-ENF 1,5	**Math**
					Science
Weeks 27-28 **T/Th** **Individual rights vs Public Order** **(OCC CRJ 101)**	• What is meant by the “Scales of Justice”? • How does the Criminal Justice system keep individual rights and public order in balance?	• Describe how justice and equality apply to the Criminal Justice System. • Identify the decisions that have shaped how we balance rights and order. • Explain the Posse Comitatus Act.	• Chapter quizzes • Chapter summaries • Current events report of the week	**Career Ready Practices** CRP 1,2,4,12	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards LW 4	**Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7
				Pathway Standards LW-ENF 1,5	**Math**
					Science
Weeks 29-30 **T/Th** **Due Process** **(OCC CRJ 101)**	• What laws and constitutional amendments guarantee due process?	• Describe the roles of each pillar in due process. • Explain individual, police, and victim rights in due process.	• Chapter quizzes • Chapter summaries • Current events report of the week	**Career Ready Practices** CRP 1,2,4,12	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards LW 4	**Literacy** 11-12RST 1,2,3,4,5,6,7,8

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
	• How does due process affect police, courts, and corrections as pillars of the criminal Justice system?	• Identify the cases in U.S. history that have addressed due process and the results of those cases.			11-12WHST 1,2,4,5,6,7
				Pathway Standards LW-ENF 1,5	**Math**
					Science
Weeks 31-32 **T/Th** **Discretionary and Ethical Issues** **(OCC CRJ 101)**	What are discretionary issues in the Criminal Justice system? What are ethical issues in the Criminal Justice system?	• Identify different discretionary and ethical issues as it relates to law enforcement. • Describe the effects of ethical precedents on today's criminal justice system. • Explain the significance of ethics and professionalism in policing. • Investigate legal issues surrounding the use of force, search and seizure, police corruption and racial profiling.	• Chapter quizzes • Chapter summaries • Current events report of the week • Evidence in Uses of Police Force Cases (Michael Brown, etc.) • Case Studies: Legal Precedents in Contemporary Police Brutality Criminal Investigations • NY Times Student Op-Ed Competition	**Career Ready Practices** CRP 1,2,4,12	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards LW 4	**Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7
				Pathway Standards LW-ENF 1,5	**Math**
					Science
Weeks 31-34 **M/W/F** **Forensic Psychology**	• How are criminals profiled?	• Locate and identify the major organs of the nervous system. • Describe the importance of the role of membranes in the nervous system. • Identify the three layers of meninges. • Identify the three types of hemorrhage involving the meninges. • Identify and describe offender-profiling procedures. • Identify psychological testing processes and procedures used to study the criminal mind. • Explain the problems with psychometric tests. • Describe brain abnormalities, genetics, and environmental factors related to the criminal mind. • Describe the physiological functions measured by a polygraph machine. • Interpret data collected from a polygraph. • Explore the psychological aspects of a serial killer.	• Notes: Brain Anatomy and Nervous System • Interview a forensic professional • Sibling Rivalry • Drive-By Shooting • Notes: Profiling Process Stages • Case Study: New York's Mad Bomber • Serial Killer Research	**Career Ready Practices** CRP 2,4,8,11	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards HL 1 LW 2,4 ST 2,6	**Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7
				Pathway Standards HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**Math** MP 1,3,5
					Science NGSSP 1,2,3,6,7,8 HS-PS4-5,4-6 HS-LS1-2,1-3
Weeks 35-39 **M/W/F** **Forensic Ecology: Soil Analysis and Water Testing**	• How are soil and water samples tested?	• Describe the distinguishing characteristics of and compositions of different soils. • Compare and contrast the different soil layers found in a soil profile.	• Soil Evidence Examination • Chemical and Physical Analysis of Sand • Article: Lead Pipes in Flint	**Career Ready Practices** CRP 2,4,8,11	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 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
		• Analyze soils using macroscopic and microscopic examination, as well as physical and chemical testing. • Describe the effects of different physical and chemical compositions of soils on the decomposition of a corpse. • Test water samples for the presence of chemicals.	• Lead Testing Inquiry • Guest Speaker	HL 1 LW 2,4 ST 2,6	11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7
				Pathway Standards HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**Math** CCSM 1-3,5
					Science NGSS 1,2,3,6,7,8 HS-ESS 2-3,3-4
Week 40 **Mock Court**	• What are the main learning goals for this past year in forensic science?	• Work as a member of team. • Work in cross-curricular groups. • Compile accomplishments in a resume. • Write a cover letter. • Explore and identify various fields of expertise in forensic science. • Research the different education and training requirements for the various careers in forensic science.	• Mock Court • Practical Exam: Crime Scene Scenario • Portfolio: Resume, Cover Letter • Presentation • Interview of professional working in the field of forensic science	**Career Ready Practices** CRP 2,4,6,7,8,11	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards HL 1 LW 2,4 ST 2,6	**Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7
				Pathway Standards HL-BRD 2,4 LW-ENF 1,4,10,12 ST-SM 1,2,4	**Math**
					Science

Syracuse City School District
Career and Technical Education Program
Course Syllabus
CSI400: Forensic Science 400 (SUPA Forensic Chemistry)

Program Overview

Forensic Science is the application of scientific methods and techniques to gather and examine information which is used in a court of law. This program is a lab-based, hands-on course that will explore the work of forensic scientists. Recent advances in scientific methods and principles have had an enormous impact upon law enforcement and the entire criminal justice system. Students will learn how forensic scientists collect and document physical evidence, conduct laboratory analysis, and present results during testimony in a court of law. Laboratory exercises will include learning techniques commonly employed in forensic investigations. The program will examine actual case histories of crimes and requires students to apply basic understandings of physics, chemistry, biology, psychiatry, math, and more to reveal the whole story of a crime. Students who successfully complete the Forensic Science program will be prepared to excel in a two- or four-year post-secondary Criminal Justice or Forensics program.

Course Description

This is the culminating course in the Forensic Science pathway. This course provides an in-depth exploration of analytical tools used in the forensic sciences. As part of this course, students will be enrolled in Syracuse University Forensic Chemistry 113. Students will also create and conduct an independent research project for the Science Fair. Students will continue to develop their knowledge and skills as they learn more advanced crime scene investigation techniques, including microscopy, DNA, blood spatter and fingerprint analysis, entomological and soil evidence analysis, and the analysis of glass, firearms and computer/digital evidence Students will explore. Students will also investigate the areas of forensic anthropology, spectroscopy, fire and arson investigation, and behavioral sciences in crime investigation. Students will focus on completing the pathway and exploring opportunities for post-secondary education, training and/or employment.

Work-Based Learning

Students will be connected with professionals in the forensic science field through field trips, job shadowing and Career Coaching, leading to opportunities for direct job training and real-world experience. Students will create and maintain a portfolio of their experiences to document the development of their skills, including a professional resume.

Pre-Requisites

CS 100: Forensic Science 100, CSI200: Forensic Science 200, and CSI300: Forensic Science 300

Course Objectives

Students will

1. Explain the professional, legal, and ethical responsibilities of forensic science professionals.
2. Document and process evidence from a crime scene.
3. Perform comparative analysis on a wide variety of forensic evidence.
4. Engage in argument from evidence.
5. Explain the role that forensic anthropologists and behavioral scientists play in forensic science.
6. Plan and carry out an independent research project.
7. Create a plan for post-secondary education and/or employment.

Integrated Academics

1 CTE Integrated ELA Credit

Concurrent Enrollment College Credit

Upon successful completion of Forensic Science 400, students will earn 4 college credits for Forensic Chemistry 113 from Syracuse University

Equipment and Supplies

- **School will provide:** Textbook, laptop and all lab materials
- **Student will provide:** 3-ring binder, composition lab book, notebook paper, pencil, pen, earbuds or headphones

Textbook

Brown, R., & Davenport, J. (2016). *Forensic Science: Advanced Investigations.* Boston, MA: Cengage Learning.
Saferstein, R. (2014). *Criminalistics: An Introduction to Forensic Science, 11th Edition.* New York: Pearson.
Spencer, J. T. (2012). *Introduction to Forensic Science: The Science of Criminalistics.* Boston, MA: Cengage Learning.

Grading

25% **Tests and Quizzes:** Tests include all summative assessments (written exams, projects, authentic products, presentations, etc.) Quizzes will cover the most recent material and review of important concepts.

25% **Labs:** Labs are often performed in groups of 2-4 students. ALL lab work will be collected and curated in a composition notebook. Lab reports will require group collaboration and individual work and some formal lab reports will be typed.

25% **Projects**

25% **Classwork:** Most work will be completed in class. Homework will mainly consist of work from absences

These percentages are estimates, and subject to change based on the nature of the students involved and the class itself.

Additional Course Policies

- **Assignments:** In order to receive full credit, work must be complete before the bell rings on the day it is due. Late or incomplete work is NOT accepted for full credit. If an absence is excused, students will have as many days as they were absent to make up missed work. Absences make it very difficult to keep up with the coursework. Some work may not be possible to make-up due to the nature of activity (bellringers, labs, class discussions, etc.). See teacher with questions. It is the students' responsibility to organize and keep track of their assignments! Most work will be turned in as a packet at the end of a unit or electronically via email or other means.
- **Labs:** Most lab work will be collected in a composition notebook. Labs will be performed in groups. Lab reports will require group collaboration and will require use of computer technology.
- **Lab Safety:** In case an accident occurs, report it immediately! Do not try to hide anything out of embarrassment - you will be making the situation worse, endangering yourself and others. Let the instructors decide on the proper course of action. Those not involved should clear the area.
- **Exams:** It is the student's responsibility to schedule with the teacher to make up a missed test/quiz for any excused absence within the week following their return. Students with an unexcused absence on the day of an exam will NOT be able to make up the exam or quiz. Students may retake quizzes if they show completed homework. Quiz and test dates will be announced 2 days and 5 days in advance, respectively.
- **Academic Integrity Policy:** Students are expected to behave ethically and with integrity. Academic dishonesty (including letting others copy) will result in no credit for the assignment and may include a meeting between the student, parent/guardian and an administrator. Please refer to school policies for more information on this policy. Please give help and hints, but not answers.

Course Calendar

Quarter	Units of Study
1	• Success in SUPA Forensic Chemistry • Evidence in the Legal System • Crime Scene Investigation • Science, Pseudoscience and Statistics • Microscopy and Methods in Examining Biological Evidence
2	• DNA Analysis • Serology: Blood Spatter • Anatomical Evidence: Fingerprints
3	• Careers in Forensic Medicine • Science Fair • Entomology and Soil in Death Investigation • Forensic Anthropology
4	• Chemical Evidence and Forensic Spectroscopy • Explosives and Arson Investigation • Physical Analysis of Glass • Firearms and Ballistics • Forensic Engineering and Computer Forensics • Behavioral Social Sciences: Psychology and Sociology

	• Portfolio Presentation

Syracuse City School District
Career and Technical Education Program
Scope and Sequence
CSI400: Forensic Science 400 (SUPA Forensic Chemistry)

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
Week 1 **Success in SUPA Forensic Chemistry**	• What are the expectations of a college course? • How can students prepare for success? • What are the professional, industry, and academic skills required in the forensic science field?	• Describe study skills and strategies that support academic success. • Explain the mindset, qualities and skills required for success in Forensic Science. • Describe the challenges and benefits of eyewitness evidence. • Present a personal action plan for success. • Demonstrate safe practices in labs and field investigations. • Write a claim and support with evidence. • Exhibit appropriate behavior in the lab. • Perform the steps of laboratory protocols accurately and in sequence. • Follow standard operating procedures for maintaining a lab manual following the steps of the scientific method (objectives, material, procedures, data/results, and conclusion).	• SUPA Registration • Article: Active Learning Strategies • Presentation: Active Learning Strategies Poster Teach Back • Lab: Safety • Anticipation Guide: Eyewitness Myths • Video: Frontline-What Jennifer Saw • Blog Reflection: Eyewitness Evidence • Uniform inspection	**Career Ready Practices** CRP 2,4,5,6,8,10,11 **Cluster Standards** HL 5 LW 5 ST 4 **Pathway Standards** HL-BRD 6 LW-ENF 1,5,6 ST-SM 3,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** MP 5 **Science** NGSSP 3
Week 2 **Evidence in the Legal System**	• What are the professional legal and ethical responsibilities of forensic scientists?	• Describe what is meant by the terms forensic science and criminalistics. • Explain the difference between a basic and an applied science. • Explain the relationship between the law, basic science and applied science. • Define Locard's Exchange Principle. • Explain how fiction contributed to the development of forensics science. • Describe the features that fictional detectives and modern forensics scientists have in common. • Define the CSI Effect and how it has influenced scientific evidence in the courtroom. • Describe the Principle of Individuality. • Explain how precedent cases pave the way for scientific evidence in the courtroom. • Explain the key features of the Frye and Daubert cases. • Explain how the Joiner, Khumo and Melendez-Dias cases affect expert testimony.	• Lab: Anthropometry • POGIL (Process Oriented Guided Inquiry): Historic Development of Forensic Science • Debate: New Jersey v. T.L.O. • Quiz 1: Ch. 1 • Reading Questions: JTS Ch. 1 • Ch. 1 Presentations • Notes: Forensic Scientist Legal Responsibilities	**Career Ready Practices** CRP 2,4,6,8,10,11 **Cluster Standards** HL 1,5 LW 1,5,6 ST 4,5,6 **Pathway Standards** HL-BRD 6 LW-ENF 1,5,6,10 ST-SM 2,3,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** CCSM 1,2,4-6 **Science** NGSS 1,2,6,7

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
Week 3-4 **Crime Scene Investigation**	• How is a crime scene processed? • What procedures are implemented at a crime scene and why are they important? • How is evidence collected and analyzed?	• Explain when evidence is admissible in court and what circumstances might render it inadmissible. • Describe the difference between class and individual characteristics. • Describe what types of comparison analyses can be done and when they are used. • Explain what is meant by probative and prejudicial evidence. • Describe and dramatize search patterns. • Identify the steps taken during the beginning of a crime scene investigation, and all the way through the investigation itself. • Conduct a systematic search of a mock crime scene. • List the details of each the jobs assigned during a crime scene investigation, and apply those skills to a model. • Recognize the importance of the use of chain of custody and search warrants.	• Lab: Scavenger Hunt • Debate: New Jersey v. T.L.O. • Reading Questions: JTS Ch. 2 • Activity: Crime Scene Search Patterns • Activity: Crime Scene Reconstruction • Intro 1 Exam: Ch. 1 and 2. • Digital (Sketch Up) or Physical (Doll House) Crime Scene Reconstruction	**Career Ready Practices** CRP 2,4,6,8,10,11 **Cluster Standards** HL 1,5 LW 1,5,6 ST 4,5,6 **Pathway Standards** HL-BRD 6 LW-ENF 1,5,6,10 ST-SM 2,3,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** CCSM 1,2,4-6 **Science** NGSS 1,2,6,7 HS-ETS1-2
Weeks 5-7 **Science, Pseudoscience and Statistics**	• What is science? • What is pseudoscience? • How can scientific methods help solve problems? • How are statistics and probability used in forensic science? • How do we estimate the reliability of measurements?	• Accurately measure and express precise measurements with correct units. • Explain the difference between accuracy and precision of measurements. • Convert between units. • Explain the SI system of measurement and how it works. • Calculate the uncertainty of a measurement using mean, median, mode, standard deviation and probability. • Describe what is meant by pseudoscience and how it can be identified. • Explain what is meant by probability and statistics. • Discus how ethics are important in forensics science. • Calculate probabilities of class evidence. • Analyze, evaluate and critique scientific explanations by using data, logical reasoning, and observations. • Identify the components necessary for 'real' science. • Perform basic statistical analyses.	• Science vs Pseudoscience Mini-Video • Accuracy, Percent Error, Reliability • Metric System Notes • Dimensional Analysis Notes • POGIL: Science vs Pseudo-Science • Lab: Standard Deviation of M&M Bags • Lab: M&M Statistics • Lab: Statistical Analysis • Lab: Building a Lie Detector • Notes: SU Forensic Chemistry Professor Guest Speaker • Reading Questions: JTS Chapter 3 • Product Testing • Observation Experimental Design • Commercial Presentation	**Career Ready Practices** CRP 2,4,5,8,11 **Cluster Standards** HL 1, LW 2,4,5 ST 2,6 **Pathway Standards** HL-BRD 2,4 LW-ENF 1,4,5,6,10,12 ST-SM 1,2,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** MP 1,2,3,4 **Science** NGSS 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
Week 8-10 **Microscopy and Methods in Examining Evidence**	• How do scientists accurately observe and measure evidence? • How does crime scene photography differ from regular photography? • How can a photographic record that could be used in court be produced?	• Describe electromagnetic radiation and how we perceive it. • Explain how a lens works to create a magnified image. • Describe the basic principles of microscope operation. • Explain and use resolution, magnification, and aperture. • Describe types of microscopy and when they are used. • Demonstrate proper use and handling of a compound microscope and a stereoscope. • Produce quality photographs of crime scenes including a photography log.	• Lab: Microscope • Notes: Microscopy • Reading Questions: JTS, Ch. 4 • Intro 2 Exam: Ch. 3 and 4 • Digital Reconstruction (Sketch Up) • Evidence Photography • Reading and Questions on Forensic Photography • Presentation of crime scene photos using iMovie	**Career Ready Practice** CRP 2,8,11,12 **Cluster Standards** HL 1 LW 2,4,5 ST 1,2,6 **Pathway Standards** HL-BRD LW-ENF 1,5 ST-SM 1,2,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** **Science** NGSSP 1,2,3,7,8 HS-PS4-5,4-6
Week 11-14 **DNA Analysis**	• What are the structure of DNA? • What are the forensic applications of DNA? • How does mitochondrial DNA and Y chromosomal typing work? • What are DNA databanks and how are they used in forensic science?	• Describe how crime-scene evidence is processed to obtain DNA. • Demonstrate how to package, collect, and analyze DNA from a crime scene. • Diagram the DNA molecule. • Describe the chemical structure of DNA and how it holds genetic information. • Compare and contrast genes, chromosomes, introns and exons. • Explain what a short tandem repeat (STR) is, and explain its importance to DNA profiling. • Explain how law-enforcement agencies compare new DNA evidence to existing DNA evidence. • Describe the use of DNA profiling using mtDNA and Y STRs to help identify a person using the DNA of family members. • Identify the difference between variable number tandem repeats (VNTR) and short tandem repeats (STR). • Explain how the Restriction Fragment Length Polymorphism (RFLP) method works. • Follow polymerase chain reaction laboratory procedures. • Explain how frequency of occurrences of STRs in populations is determined and used. • Explain how mitochondrial DNA can be used in forensic investigations.	• DNA Extraction • POGIL: DNA • Reading Questions: JTS Ch 5 • DNA Profiling Interactive • Restriction Enyzme ID • Lab: Crime Scene DNA PCR • Paper PCR • PCR- Lewinsky/Clinton Scandal Activity • Rape Case Study • Romanov Family Case Study	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** HL 1 LW 2,4 ST 2,6 **Pathway Standards** HL-BRD 2,3,4 LW-ENF 1,5,6,10,12 ST-SM 2	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** MP 2, 3, 4, 5, 7 **Science** NGSSP 1,2,3,4,6,7,8 HS-LS1-1,3-1,3-3

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
		• Calculate the random match probability (RMP) of a genetic profile. • Describe how combined DNA Index Systems (CODIS) is used in criminal investigations.			
Week 15-17 **Serology: Blood Spatter**	• What is serology and how is it used to solve crimes? • How is blood identified at a crime scene? • How are blood patterns analyzed?	• Analyze stains to determine the presence of blood. • Interpret events through blood pattern analysis. • Analyze bloodstain patterns based on source, direction, and angle of trajectory. • Compare and contrast low, medium, and high velocity blood spatter. • Identify types of blood transfer patterns. • Identify different types of blood spatter patterns (drop, castoff, transfer, swipe, spurt, expirated). • Properly perform and explain a presumptive blood test (Kastle-Meyer). • Preserve blood evidence according to proper procedures.	• Movie: 48 Hours-Doctor's Daughter • Lab: Blood Spatter • Motion and Angle of Impact Experiments • Dr. Neulander Case Blood Spatter • Detection of Blood • Weapon Inquiry	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** HL 1,3 LW 3,4 ST 2,6 **Pathway Standards** HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** MP 2,3,4,5,7 **Science** NGSSP 1,2,3,4,6,7,8 HS-PS 2-3
Week 18-20 **Anatomical Evidence: Fingerprints**	• How is fingerprint evidence analyzed in a crime scene?	• Describe the structure of friction skin: sweat pore, sweat pore duct, sweat gland, papillae, dermis, epidermis, friction ridge. • Describe fingerprint classification. • Describe the three fundamental principles of fingerprinting (first, second, and third principles). • Compare and contrast latent, plastic, and visible fingerprints. • Demonstrate how fingerprint evidence is collected and select appropriate techniques for the development of latent prints on various surfaces. • Develop latent fingerprints using dusting, staining, and chemical fuming. • Develop a plastic fingerprint using a mold. • Calculate TRC (Total Ridge Count). • Compare and contrast lab methods to develop fingerprints. • Use digital photography to compare and analyze fingerprints. • Describe the function of IAFIS (Integrated Automated Fingerprint Identification System).	• Lab: Fingerprints • Fiber Microscopy • Fiber Burn Testing • Reading Questions: JTS Ch 7 • Activity: Chemical Reactions Demonstration • *Extension:* Op-Ed: Debunk FBI Hair Forensics • Lab: Fingerprint TRC Statistics • Lab: Fingerprinting Methods • Iodine Fuming Demonstration • Ninhydrin Development • Superglue Fuming • Acidified Hydrogen Peroxide Brass Cartridge Cases • Demonstration: Latent Fingerprint Visualization Methods	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** HL 1 LW 2,4 ST 2,6 **Pathway Standards** HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** MP 1,3,5 **Science** NGSSP 1,2,3,6,7,8 HS-LS1-2

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
		• Utilize the primary classification (the Henry System) "fraction" calculations. • Analyze the pores and spots between the friction ridges using tertiary classification. • Explain the ACEV (analysis, comparison, evaluation and verification) method to reach a determination on each print. • Utilize ALS (alternate light source) to identify a print. • Create and document visible fingerprints using digital photographs. • Explain the limitations and strengths of biometric information.			
Week 21-22 **Careers in Forensic Medicine**	• What is forensic pathology? • What are the medical careers path in forensics?	• Analyze the role of forensic pathologists and anthropologists in investigations. • Explain the processes and timelines of human death and decomposition. • Describe the role of mitochondrial DNA in bone identification. • Describe the aspects of medicine are involved in a medicolegal practice. • Explain the duties and training for coroners and medical examiners. • Interpret manner of death, cause of death, and mechanism of death. • Describe and apply the classifications for manner of death. • Perform a digital autopsy. • Investigate the major systems of the body. • Characterize the major types of trauma.	• Lab: Anthropometry • Reading Question: JTS Ch 8 • Video Autopsy • WEBQUEST-Virtual Autopsy • Life Masks: Biometrics of the Face • POGIL: Human Forensic Anatomy • And the Dead Shall Speak story, video, interview • Interview of professional working in the field of forensic science • Lab: Body Farm Inquiry • Case Studies: Claude Snow, Grave at Vukovar, Billy the Kid	**Career Ready Practices** CRP 2,4,8,10,11 **Cluster Standards** HL 1 LW 1,2,4 ST 2,6 **Pathway Standards** HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** MP 1,3,5 **Science** NGSSP 1,2,3,6,7,8 HS-LS1-2
Weeks 23-26 **Science Fair**	• How do forensic scientists plan and carry out investigations? • How do forensic scientists construct explanations and design solutions?	• Create an experimental research question. • Write a hypothesis to test a research question. • Use credible sources to compile background research on a topic. • Outline and draft a background research paper. • Write a testable hypothesis statement. • Construct an experimental design (with the independent, dependent, and control variables) to test a hypothesis. • Create a data table to collect quantitative and qualitative data. • Create a graph to display quantitative data. • Analyze data for patterns and trends.	• Brainstorm Activity • Research Plan and Project Proposal Conference • Credible Source Pyramid and Analysis • Activity: Research Notes • Research Background Writing Outline • Science Fair Journal Reflection • Lab: Conduct Research Experiment • Collect and Display Data in Graph form	**Career Ready Practice** CRP 2,4,6,7,8,11,12 **Cluster Standards** HL 1,2,3 LW 1,3,5,6 ST 2,3,4,5,6 **Pathway Standards** HL-BRD 1,6 LW-ENF 1,4,5,6,12 ST-SM 3	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** MP 1,2,3,4,5,6,7,8 **Science** NGSSP 1,3,4,5,6,7,8 HS-ETS1-1,1-2,1-3

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
		• Draft conclusions from data to support or abandon hypothesis and explain results. • Prepare a research presentation display board. • Present research conclusions to a public audience. • Reflect and revise work.	• Analyze data and summarize conclusions • Project: Science Fair Display Board • Science Fair Poster Presentation (PSLA Science Fair, CTE Expo, MoST Science Fair)		
Weeks 27-28 **Entomology and Soil in Death Investigation**	• How is the time of death determined? • What are the different fields of forensic ecology? • What are different methods of chemical analysis?	• Analyze physical and chemical properties of evidence collected from a crime scene. • Identify flies, maggots and pupa that visit a dead body. • Describe the insect life cycle. • Describe the make-up of soil. • Describe how soil affects the decomposition of dead bodies. • Conduct assay phosphate concentrations in soil specimens. • Identify the spectroscopic characteristics of soil. • Extract ion species from a soil sample. • Use spectrometer to analyze samples.	• POGIL: Maggots to Murder • Forensic Entomology Notes • Lab: Anthropology • Lab: Entomology and Crime Solving Insects • Lab: Physical Characteristics of Soil-Soil Density, Settling Time, Particle Size Distribution • Microscopic Characteristics of Soil • Lab: Assay • Reading Questions: JTS, Chapter 9	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** HL 1 LW 2,4 ST 2,6 **Pathway Standards** HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** **Science** HS-LS2-6
Weeks 29-30 **Forensic Anthropology**	• What is forensic anthropology and what can it tell us about human remains? • What role do anthropologists play in forensic science? • What is forensic radiology?	• Determine if an object is bone or not. • Identify a bone as human. • Determine the age of a bone. • Construct a biological profile from skeletal remains. • Prepare a facial reconstruction from a skull. • How to gain insight into how someone died by examining their bones. • Process a crime scene containing bones. • Analyze the role of forensic anthropologists in investigations. • Identify career-related information that is relative to making career decisions. • Review the major bones of the human skeletal system. • Compare the composition and structure of human and animal bones. • Describe the techniques used to excavate bones. • Determine the unique characteristic of an individual (e.g. age, gender, race, and height) from their bones.	• POGIL: Skulls, Hips and Femurs • Reading Questions: JTS Ch. 10 • Lab: Measurable You Inquiry • Interview of professional working in the field of forensic science • Bone Quiz • Lab: Who Is The Skeleton in the Closet? • Lab: One Bite Out of Crime Forensic Odontology • Lab: Talking Bones	**Career Ready Practices** CRP 2,4,8,10,11 **Cluster Standards** HL 1 LW 1,2,4 ST 2,6 **Pathway Standards** HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** MP 1,3,5 **Science** NGSSP 1,2,3,6,7,8 HS-LS1-2

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
		• Explain the processes and timelines of human death and decomposition. • Describe how bone is formed. • Distinguish between male and female skeletal remains based on skull, jaw, brow ridges, pelvis, and femur. • Describe how bones contain a record of injuries and disease. • Describe how a person's approximate age could be determined by examining his or her bones. • Explain the differences in facial structures among different races. • Describe the role of mitochondrial DNA in bone identification.			
Weeks 31-32 **Chemical Evidence and Forensic Spectroscopy**	• How is chemical evidence analyzed? • How can paint chips be observed, compared, and used to prove ownership?	• Use chromatography to separate mixtures. • Use classical analytical chemistry methods. • Use gravimetric and volumetric analysis. • Identify the different components of automobile paint. • Characterize the microscopic examination of paint. • List and define the techniques used in paint comparisons. • Explain how to properly collect and preserve paint evidence. • Perform gas chromatography (GC) spectrum analysis.	• Reading Questions: JTS Ch. 11 • Lab: Chromatography • Lab: Spectroscopy • POGIL: Spectroscopy and Chromatography • Reading Questions: JTS Chapter 12 • Lab: Paint Layer Determination	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** HL 1 LW 2,4 ST 2,6 **Pathway Standards** HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** CCSM 1,3,5 **Science** NGSS 1,2,3,6,7,8 HS-PS1-1,8,10,2-6
Weeks 34 **Explosives and Arson Investigation**	How is arson investigated?	• Define fire. • Define the fire tetrahedron. • Explain the four types of fires and give examples. • Describe the chemical components of fire. • State the information that smoke from a fire provides. • State the information that the colors of fire provide. • Describe the parts of a fire investigation. • Explain the importance of the determination of the point of origin and give examples of different burn patterns: chimney effect, v patterns, char patterns, heat shadows. • Identify and state the characteristics of different accelerants.	• Reading Questions: JTS Chapter 14 • Explosives/Arson: The Nightclub Fires of 2002 • 911 • NOVA: The Serial Arsonist • Death by Fire Case Study • Reading: Oklahoma City Bombing • Guest Speaker: Onondaga County Arson Investigator • World Trade Center Bombing	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** HL 1 LW 2,4 ST 2,6 **Pathway Standards** HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** CCSM 1,3,5 **Science** NGSS 1,2,3,6,7,8 HS-PS1-5,1-6

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
		• Define arson. • Identify signs of arson. • Give examples of the primary motives for arson. • Outline the systemic process of an arson investigation. • Describe the process of collection and preservation of arson evidence. • Explain the difference between fire and explosions. • Identify common explosives. • Identify explosives in a laboratory. • Compare the different types of explosives: primary explosives, low explosives, high explosives. • Describe the role of forensic science in relation to terrorism and homeland security.			
Weeks 35 **Physical Analysis of Glass**	• How do crime scene investigators examine glass?	• Measure density and viscosity. • Determine refractive index and birefringence. • Explain the formation of color, color perception in additive and subtractive methods. • Calculate the direction of a projectile by examining glass fractures. • Compare the composition of glass fragments. • Describe the electromagnetic spectrum and light characteristic including waves, wavelength, frequency, and speed. • Explain and utilize scientific technology, including various microscopes, types of lasers, and the spectrophotometer, that apply the properties of light to investigate trace evidence. • Determine the identity of trace evidence by applying scientific theories of light.	• Reading Questions: Chapter 15 • Forensic Glass Analysis Experiment • Density Phenomenon Beads • Density of Glass: The Flotation Method • Density: Displacement • Density Inquiry • Forensic Glass Quiz and Exam • Lab: Refractive Index (RI) of Glass by Submersion • Observe and Compare Glass Shards	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** HL 1 LW 2,4 ST 2,6 **Pathway Standards** HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7 **Math** CCSM 1-3,5 **Science** NGSS 1,2,3,6,7,8 HS-PS1-1
Weeks 36 **Firearms and Ballistics**	• How do crime scene investigators examine tool mark impressions, bullet fragments, and bullet holes?	• Explain the individual characteristics of tool marks. • Recognize characteristics of bullet and cartridge cases. • Explain laboratory methodologies used to determine whether an individual has fired a weapon, such as identifying gunshot residue.	• Toolmark Analysis Experiment • Lab: Marshmallow Shooters Trajectory • Firearms and Tool Marks Examination • Fire Arms ID certification • Lab: Lands and Grooves	**Career Ready Practices** CRP 2,4,8,11 **Cluster Standards** HL 1 LW 2,4 ST 2,6	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6 **Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7

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
		• Recognize the type of information available through the National Integrated Ballistics Information Network. • Summarize Goddard and Sacco Vanzetti case issues. • Describe the caliber, gauge, mm measurements, firing pin markings, cartridge propellants, structure of cartridge and contents to analyze the origin of a bullet or casing. • Describe difference among firearm types. • Categorize the lands and grooves on a shell casing.	• Case Study: JFK, Oscar Pistorius • Frontline: Ring of Fire- The Crisis of American Made Handguns • Ballistics NOVA: Who Shot JFK?	**Pathway Standards** HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**Math** CCSM 1,2,3,5 **Science** NGSS 1,2,3,6,7,8
Week 37 **Forensic Engineering and Computer Forensics**	• What is the role of digital evidence in forensic Investigations today? • How are digital documents analyzed?	• Explain the role of the FBI, CIA, NSA and Office of Homeland Security in 21st Century. • Describe the process of security encryption. • Describe the process of identifying and securing digital evidence. • Analyze digital evidence.	• Reading Questions: JTS Chapter 18 • NOVA: Decoding Nazi Secrets • NOVA: Decoding Enigma • 9/11 WTC Tower Collapse • Lab: Tower Building • Lab: Bridge Failure Forensic Analysis	**Career Ready Practices** CRP 2,4,8,11	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards HL 1 LW 2,4 ST 2,6	**Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7
				Pathway Standards HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**Math** CCSM 1,2,3,5 **Science** NGSS 1,2,3,6,7,8 HS-PS4-2
Week 38-39 **Behavioral Social Sciences: Psychology and Sociology**	• What is criminal psychology and what does it tell us about criminal behavior? • Can we create a profile of a criminal/ serial killer?	• List the key contributor to and their work in the field of criminal profiling. • Explain the stages of the criminal profiling process. • Differentiate between the roles of the investigator and the profiler. • Compare and contrast an interview and an interrogation. • Describe the cognitive approach for interviewing. • Describe special considerations for interviewing children. • Differentiate between the five common models of interrogation. • Explain the importance of objectivity in report writing.	• Analysis of Serial Killers • Fakebook Criminal Laboratory	**Career Ready Practices** CRP 2,4,8,11	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7 11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards HL 1 LW 2,4 ST 2,6	**Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7
				Pathway Standards HL-BRD 2,4 LW-ENF 1,10,12 ST-SM 1,2,4	**Math** **Science**
Week 40	• What are the main learning goals for this		• Crime Scene Simulations • Crime Scene Reports	**Career Ready Practices** CRP 2,4,6,7,8,11	**ELA** 11-12R 1,2,4,7,8,9 11-12W 1,2,5,6,7

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
Portfolio Presentation	past year in forensic science?	• Complete the CTE assessment demonstrating a though knowledge of forensic science. • Work as a member of team. • Work in cross-curricular groups. • Compile accomplishments in a resume. • Write a cover letter. • Explore and identify various fields of expertise in forensic science. • Research the different education and training requirements for the various careers in forensic science.	• Develop a FS Career/Education recruiting presentation: college entrance requirements, etc. • Pathbrite Portfolios • Resumes		11-12SL 1,2,3,4,5,6 11-12L 1,2,3,4,5,6
				Cluster Standards HL 1 LW 2,4 ST 2,6	**Literacy** 11-12RST 1,2,3,4,5,6,7,8 11-12WHST 1,2,4,5,6,7
				Pathway Standards HL-BRD 2,4 LW-ENF 1,4,10,12 ST-SM 1,2,4	**Math**
					Science

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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

Select	First Name	Last Name	MI	City	State	Registration Status
◉	JOSEPH	SMITH		MANLIUS	NY	Registered Active

Certificate Title	Issue / Effective Date	Expiration Date	Status
Biology 7-12 Transitional B Certificate	07/02/2014	05/22/2015	Expired
Biology (Grades 5-9) Transitional B Certificate	02/01/2014	05/22/2015	Expired
Biology 7-12 Initial Certificate	05/27/2015	01/31/2021	Expired
Chemistry 7-12 Initial Certificate	09/27/2017	01/31/2023	Issued
Biology 7-12 Professional Certificate	11/30/2019		Issued
Chemistry 7-12 Professional Certificate	03/29/2019		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
◉	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

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Search Results

Select	First Name	Last Name	MI	City	State	Registration Status
◉	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

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Search Results

Select	First Name	Last Name	MI	City	State	Registration Status
◉	SUSAN	CENTORE	E	SYRACUSE	NY	Registered Active

View Detail

Certificate Information for New York State Teaching Certificate Holder

Certificate Title	Issue / Effective Date	Expiration Date	Status
Business And Distributive Education Permanent Certificate	02/01/2004		Issued
Coordinator of Cooperative Work-Study Programs Permanent Certificate	02/01/2004		Issued
Business Education Provisional Certificate	02/01/1999	01/31/2004	Expired
School District Leader Professional Certificate	04/11/2017		Issued

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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

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Medical Forensics

EXAM INFORMATION

Exam Number

730

Items

65

Points

68

Prerequisites

NONE

Recommended Course Length

ONE YEAR

National Career Cluster

HEALTH SCIENCE

LAW, PUBLIC SAFETY, CORRECTIONS & SECURITY

Performance Standards

INCLUDED (OPTIONAL)

Certificate Available

YES

DESCRIPTION

This year-long course is designed to create an awareness of the branch of health science relating to medical forensics. This course focuses on introductory skills and assessment in order to develop the ability to identify, analyze, and process logically using deductive reasoning and problem solving. Medical forensics involves many aspects of health science instruction including laboratory skills and safety, microscopy, toxicology, measurement, physical evidence identification, pathology, anthropology, entomology, psychology, blood spatter analysis, and career exploration.

EXAM BLUEPRINT

STANDARD	PERCENTAGE OF EXAM
1. Fundamental Aspects of Medical Forensics	3%
2. Fundamental Laboratory Skills	3%
3. Medical Forensics Investigation	4%
4. Analyzing Trace Evidence (Hair & Fiber)	10%
5. Fingerprint Identification	15%
6. Blood Investigation	15%
7. Death Investigation	16%
8. Exploring Aspects of a Criminal Mind	7%
9. Exploring Physical Evidence and Remains	12%
10. Investigation of Common Poisonings & Adverse Effects of Drugs	6%
11. Importance of DNA Evidence	9%

STANDARD 1

Introduction to Medical Forensics-Students will explore the fundamental aspects of Medical Forensics

Objective 1 Detail the history and development of medical forensics.

1. Create a historical timeline.
2. Explore a variety of careers associated with medical forensics professions.
    1. Crime laboratory analyst
    2. Clinical laboratory technician
    3. Microbiologist
    4. Fingerprint analyst
    5. Criminalist
    6. Crime scene photographer
    7. Phlebotomist
    8. Forensic serology DNA criminalist
    9. Serology technician
    10. Forensic psychologist
    11. Mental health counselor
    12. Toxicologist
    13. Biochemist
    14. Pharmacologist
    15. Geneticist
    16. Medical examiner

Objective 2 Discuss the organization of the crime laboratory and detail the functions it serves.

1. Discuss the federal programs established in the United States to investigate crimes.
    1. ATF
    2. FBI
    3. Post Office
    4. DEA
2. Describe the organization of the Utah Crime Lab.
3. Compare and contrast the Utah Crime Lab with a crime lab from another state and an international crime lab.

Objective 3 Describe the importance of physical evidence and observation.

1. List the types of evidence.
    1. Eyewitness

2. Class evidence
3. Physical evidence
    1. Trace
    2. Circumstantial
    3. Individual
    4. Class
2. Discuss how evidence is used to convince a jury of guilt.
3. Review and practice the steps of becoming an accurate observer.
    1. Observe systematically
    2. Turn off filters
    3. Interpret information later
    4. Documentation
        1. Written
        2. Photographs

STANDARD 2

Fundamental Laboratory Skills-Students will explore essential laboratory safety skills and fundamental skills related to microscopy and measurement

Objective 1 Demonstrate appropriate use of personal protective devices.

1. Describe how personal protective devices protect the evidence and the lab worker.
2. Demonstrate how to properly use personal protective devices (e.g., lab coats, gloves, safety glasses.
3. Demonstrate safe removal of gloves.

Objective 2 Exhibit appropriate behavior in the lab.

1. Explain the dangers of evidence contamination through food, drink, cosmetics, lotion, eye drops, and contact lenses.
2. Follow proper disposal and clean-up procedures with respect to chemicals and laboratory equipment.
3. Demonstrate proper hand washing technique.

Objective 3 Use laboratory equipment correctly and safely.

1. Demonstrate the proper use of equipment.
    1. Micropipette
    2. Centrifuge
    3. Spectrophotometer

4. Electrophoresis apparatus-DNA
5. Thermocycler
6. Microscope
7. Balance
8. Water bath
9. Vernier calipers
10. Glassware (metric units)
11. Rulers/Measuring tapes

2. Demonstrate proper use, handling, and components of a compound microscope and a stereoscope.
3. Demonstrate the ability to create a wet mount slide.

Objective 4 Follow laboratory procedures.

1. Understand the purpose of individual steps within a protocol.
2. Perform the steps of laboratory protocols accurately and in sequence.

Objective 5 Comply with policies and requirements for maintaining a lab manual.

1. Follow standard operating procedures for maintaining a lab manual.
2. Document laboratory work following the steps of the Scientific Method.
    1. Objectives
    2. Material
    3. Procedures
    4. Data/Results
    5. Conclusion

Objective 6 Demonstrate proper handling of chemicals.

1. Communicate the rationale for laboratory labeling procedures.
2. Recognize and comply with the labeling of chemicals used in a laboratory setting for safe handling and storage (flammability, corrosiveness, biohazards, toxicity, etc.).
3. Reference and interpret the guidelines in Safety Data Sheets (SDS).

Standard 2 Performance Evaluation included below (Optional)

STANDARD 3

Medical Forensics Investigation-Students will describe techniques used to process a homicide crime scene and preserve the evidentiary value of the scene

Objective 1 Describe how various medical forensics professionals process a crime scene.

1. Responding officer
2. Crime Scene Investigator
3. Crime Scene Photographer
4. Medical Examiner

Objective 2 Demonstrate or describe proper procedures of evidence collection.

1. Trace (demonstrate)
2. Biological (describe)
3. Drugs, Plants, and Drug Paraphernalia (Describe)
4. Weapons (describe)
5. Fingerprint (demonstrate)

Objective 3 Identify how a crime scene and evidence may be compromised.

1. Contamination (family, law enforcement, crime scene workers, etc.)
2. Chain of custody (evidence lost, etc.)
3. Environmental conditions (temperature, moisture, etc.)
4. Preservation of the crime scene (value of evidence, etc.)
5. Processing at the lab

Standard 3 Performance Evaluation included below (Optional)

STANDARD 4

Students will identify and analyze trace evidence, emphasizing hair and fiber

Objective 1 Examine trace evidence using a microscope, chromatography, and other techniques.

1. Define and list examples of trace evidence.
2. Collect and analyze various types of trace evidence (dust, pollen, fiberglass, etc.)
3. Define and identify a variety of microbes.
4. Use a compound microscope to identify microbes.

Objective 2 Examine and analyze the forensic aspects of hair.

1. Describe the microscopic structure of hair.
    1. Shaft
        1. Cortex
        2. Cuticle
        3. Medulla
    2. Root
    3. Follicle
2. Describe the location of nuclear and mitochondrial DNA associated with hair.
    1. Shaft
    2. Root
3. Describe the hair growth cycle and how it relates to trace evidence.
    1. Anagen, catagen, telogen
    2. Chemical absorption
4. Describe how to differentiate between animal hair and human hair.

Objective 3 Examine and analyze the forensic aspects of fibers by using physical (microscopic) and chemical (burn, acid, base, acetone) testing methods.

1. Natural fibers
    1. Wool
    2. Silk
    3. Cotton
    4. Cashmere
    5. Hemp
    6. Etc.
2. Synthetic
    1. Polyester
    2. Spandex
    3. Acrylic
    4. Nylon
    5. Etc.

STANDARD 5

Fingerprint Identification-Students will explore fingerprint identification

Objective 1 Describe fingerprint classification.

1. Describe the 3 fundamental principles of fingerprinting.
    1. First degree
    2. Second degree
    3. Third degree
2. Identify the degrees of fingerprinting
    1. First degree
    2. Second degree
        1. Bifurcation
        2. Ridge ending
        3. Short ridge
        4. Island/Dot
        5. Double bifurcation
        6. Crossover
        7. Enclosure
    3. Third degree

Objective 2 Identify and classify fingerprint and ridge patterns.

1. Classify fingerprints into 3 basic patterns.
    1. Loops
        1. Right
        2. Left
    2. Whorls
        1. Double
        2. Plain
        3. Central
        4. Accidental
    3. Arches
        1. Tented
        2. Plain
2. Identify individualization of fingerprints.
    1. Ridge characteristics
    2. Ridge count
3. Describe the IAFIS System of fingerprint identification.

Objective 3 Compare and contrast latent, plastic, and visible fingerprints.

1. Develop latent fingerprints using dusting, staining, and chemical fuming.
2. Develop a plastic fingerprint using a mold (wax, soap, putty, etc.)
3. Create and document visible fingerprints using digital photography.

Standard 5 Performance Evaluation included below (Optional)

STANDARD 6

Students will investigate the characteristics of blood, blood testing, and bloodstain analysis

Objective 1 Identify the components and chemical properties of blood.

1. List the components of blood.
    1. Plasma
    2. Erythrocytes (red blood cells)
    3. Leukocytes (white blood cells)
    4. Thrombocytes (platelets)
2. Identify the antigens and antibodies that determine ABO blood types and the Rh factor.

Objective 2 Determine genetic probabilities using blood types.

1. Use a Punnett Square to determine blood type probabilities.
2. Apply the use of a Punnett Square to solve paternity questions.

Objective 3 Examine and analyze blood spatter.

1. Illustrate size, shape, and directionality of blood spatter in a laboratory experiment.
2. Compare and contrast low, medium, and high velocity blood spatter.
3. Examine different types of blood spatter patterns.
    1. Drip
    2. Castoff
    3. Transfer
    4. Swipe
    5. Wipe
    6. Arterial
    7. Expirated
    8. Misting
    9. Void

Objective 4 Describe proper procedures for blood stain evidence collection, presumptive testing (Kastle-Meyer), and preservation.

1. Describe how to collect a wet stain and a dry stain.

2. Demonstrate how to collect a large object in reference to blood evidence collection (i.e. sheets, blankets, clothing, etc.)
3. Using residual blood from a mammal, perform and explain a presumptive blood test.
    1. i.e. Absorption pads from ground beef

Standard 6 Performance Evaluation included below (Optional)

STANDARD 7

Students will investigate various aspects of death

Objective 1 Describe correct anatomical position and the role it plays in death investigation.

1. Describe anatomical position.
2. Apply directional terms related to autopsy.
    1. Superior
    2. Inferior
    3. Anterior
    4. Posterior
    5. Dorsal
    6. Ventral
    7. Medial
    8. Lateral
    9. Proximal
    10. Distal
    11. Deep Superficial
    12. Supine
    13. Prone

Objective 2 Locate the body cavities and body regions and identify the major organs within each.

1. Dorsal cavity
    1. Cranial
    2. Spinal
2. Ventral cavity
    1. Thoracic
    2. Abdominal
    3. Pelvic

3. Body regions
    1. Right hypochondriac
    2. Left hypochondriac
    3. Epigastric
    4. Right lumbar
    5. Left lumbar
    6. Umbilical
    7. Right inguinal
    8. Left inguinal
    9. Hypogastric

Objective 3 Identify the following organs and their location.

1. Lungs
2. Heart
3. Diaphragm
4. Esophagus
5. Trachea
6. Stomach
7. Spleen
8. Pancreas
9. Liver
10. Gallbladder
11. Small Intestine
12. Large intestine
13. Kidney
14. Bladder

Objective 4 Compare and contrast the manner and method of death.

1. Define and list manners of death.
2. Define and list methods/causes of death.
3. Define and list mechanisms of death.

Objective 5 Identify the steps of an autopsy procedure and discuss the role an autopsy report may play in a death investigation.

1. List the steps of an external examination.
2. Describe the proper technique to perform a Y-shaped incision
3. List the steps of an internal examination.

Objective 6 Identify the stages of decomposition to determine the approximate time of death.

1. Define taphonomy and describe the stages of decomposition.
    1. Fresh
    2. Putrefaction
    3. Black putrefaction
    4. Butyric
    5. Dry
2. Compare and contrast the following:
    1. Algor mortis
    2. Rigor mortis
    3. Livor mortis
3. Identify common insects associated with decomposition (i.e. blow fly, carrion beetle, etc.) and diagram their life cycles.
    1. Egg
    2. Larva
    3. Pupa
    4. Adult
4. Identify various environmental factors related to time of death (temperature, humidity, cause of death, etc.)

Standard 7 Performance Evaluation included below (Optional)

STANDARD 8

Students will explore aspects of the criminal mind

Objective 1 Locate and identify the major organs of the nervous system.

1. Brain
    1. Cerebral cortex
    2. Cerebellum
2. Spinal cord

Objective 2 Identify and describe offender profiling procedures.

1. Profiling input
2. Decision process models
3. Crime assessment

4. Criminal profile
5. Investigation
6. Apprehension

Objective 3 Identify psychological testing processes and procedures and other factors that affect the criminal mind.

1. Describe the tests used to determine the cognitive and personality types of offenders.
2. Discuss the problems with psychometric tests.
3. Describe brain abnormalities, genetics, and environmental factors related to the criminal mind.
4. Describe the physiological functions measured by a polygraph machine.

Objective 4 Compare and contrast neurobiological brain abnormalities and mental conditions related to abnormal psychology and the criminal brain and technical instrumentation used to diagnose these abnormalities.

1. Describe brain abnormalities, genetics, and environmental factors related to the criminal mind.

Objective 5 Explore the psychological aspects of serial killers and mass murderers.

1. Define serial killer.
2. Define mass murderer.
3. Explore the motives of a serial killer.
4. Compare and contrast the types of serial killers.
5. Explore the motives of a mass murder.

STANDARD 9

Students will explore characteristics of physical evidence and remains

Objective 1 Identify the basic bones of the skeleton and distinguish the differences between long and short bones.

1. Cranium
2. Vertebrae
3. Sternum
4. Xiphoid process

5. Ribs
6. Hyoid
7. Humerus
8. Radius
9. Ulna
10. Carpals
11. Metacarpals
12. Phalanges
13. Pelvis
14. Femur
15. Patella
16. Tibia
17. Fibula
18. Tarsals
19. Metatarsals
20. Phalanges

Objective 2 Use skeletal remains to determine the physical characteristics of an individual.

1. Determine the sex of an individual based on skull, jaw, brow ridge, pelvis, and femur.
2. Determine the ancestry of an individual.
3. Estimate the age of an individual.
4. Estimate the height, build, and handedness of an individual.

Objective 3 Identify injuries, bone diseases, and possible causes/methods of death using bone characteristics.

1. Compare and contrast pre and postmortem bone injuries (i.e. fractures).
2. Identify bone patterns indicating disease (i.e. arthritis).
3. Identify bone markings that could indicate cause of death (i.e. stab wound, bullet hole, blunt force trauma, etc.)

Objective 4 Describe how teeth are used in forensic identification.

1. Name and number deciduous (baby) and permanent teeth.
2. Employ dentition patterns as a means for bite mark identification.
3. Describe the use of forensic dentistry in regard to mass disasters and body identification.

Standard 9 Performance Evaluation included below (Optional)

STANDARD 10

Students will develop an understanding of the adverse effects of drugs and be acquainted with the laboratory investigation of the most common poisonings

Objective 1 Identify the five schedules of drug types and classify according to the effects that they have on the body.

1. Describe the five schedules of drug types.
    1. Schedules 1-5
2. Classify the Categories of drugs based on the physiological effects on the body and the chemical composition.
    1. Stimulants (i.e. Amphetamines, Cocaine, Crack, Methamphetamines, Adderall, other mental disorder medications)
    2. Depressants (i.e. Alcohol, Sedatives, Xanax, Marijuana, All narcotics, other
    3. mental disorder medication)
    4. Narcotics/Opioids (i.e. Heroin, Codeine, Methadone, Oxycodone)
    5. Hallucinogens (i.e. Ecstasy (MDMA), Bath salts, Mushrooms, GHB, other "date rape" drugs)

Objective 2 Describe how individual body systems are affected by drug intake.

1. Integumentary
2. Skeletal
3. Muscular
4. Nervous
5. Cardiovascular
6. Respiratory
7. Endocrine
8. Digestive
9. Urinary
10. Reproductive

Objective 3 Identify signs and symptoms of an overdose.

1. Stimulants
2. Depressants
3. Narcotics/Opioids
4. Hallucinogens

Objective 4 Describe current field and laboratory procedures used for measuring the concentration of alcohol in the bloodstream.

1. Describe techniques used to measure the blood alcohol content (BAC).
    1. Through blood
    2. Through the breath
2. Anabolic steroids
3. Depressants (including alcohol)
4. Bacterial toxins
    1. Botulism
    2. Tetanus
5. Heavy metals and pesticides
    1. Lead
    2. Mercury
    3. Arsenic
    4. Cyanide
    5. Strychnine

Objective 5 Discuss other chemical and biological agents that have high mortality rates with exposure.

1. Bacterial toxins
    1. Botulism (clostridium botulinum)
    2. Tetanus (clostridium tetani) lockjaw
2. Bioterrorism
    1. Ricin (castor beans)
    2. Anthrax (Bacillus anthracis)

Objective 6 Compare and contrast methods used to collect and package drug evidence.

1. Identify procedures used to collect and package plant substances.
2. Identify procedures used to collect and package liquids.
3. Identify procedures used to collect and package biohazards.

STANDARD 11

Students will investigate the importance of DNA evidence

Objective 1 Identify the structure and function of a DNA molecule.

1. Describe the structure of DNA.
2. Describe the function of DNA.
3. Compare and contrast nuclear DNA and mitochondrial DNA

Objective 2 Describe advancements in technology used to obtain a DNA fingerprint.

1. Describe the purpose of PCR.
2. Define RFLP and discuss how it relates to forensic identification.
3. Define STR and discuss how it relates to forensic identification.
4. Describe the CODIS System of DNA identification.
5. Processing at the lab.

Medical Forensics

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 2 - Fundamental Laboratory Skills — Score:

- □ Maintain an accurate lab manual.
  - Follow standard operating procedures for maintaining a lab manual.
  - Document laboratory work following the steps of the Scientific Method.

STANDARD 3 - Medical Forensics Investigation — Score:

- □ Collect and properly label evidence.

STANDARD 5 - Fingerprint Identification — Score:

- □ Develop a latent fingerprint and identify 10 ridge characteristics.

STANDARD 6 - Blood Investigation — Score:

- □ Classify blood spatter by velocity.
  - High
  - Medium
  - Low

STANDARD 7 - Death Investigation — Score:

- □ Identify the steps of an autopsy procedure by animal dissection.
  - Steps of an external examination
  - Proper Y-shaped incision technique

- Steps of an internal examination

STANDARD 9 - Exploring Aspects of a Criminal Mind Score:

- □ Identify the sex of an individual based on skeletal markers.
  - Skull
  - Jaw
  - Brow ridge
  - Pelvis
  - Femur
- □ Match a bite mark from a victim to the perpetrator.

Workplace Skills

- □ Communication
- □ Problem solving
- □ Teamwork
- □ Critical Thinking
- □ Dependability
- □ Accountability
- □ Legal requirements/expectations

PERFORMANCE STANDARD AVERAGE SCORE:

Evaluator Name:

Evaluator Title: _____

Evaluator Signature: _____

Date: _____

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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

☐	**Table of Contents:**	This should list each section and piece of the portfolio in the order it appears
☐	**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.
☐	**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.
☐	**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.
☐	**Certifications/Credentials**	Students should include copies of any credentials and/or certifications they have earned as a result of their program.
☐	**Transcript**	Student provides a copy of his or her full academic transcript.
☐	**Employability Profile**	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. 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.,

		employer and/or job coach).
☐	**College Research**	A written research assignment focusing on three colleges offering programs in the student's chosen career pathway.
☐	**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
☐	**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.
☐	**Work Samples**	Examples highlighting ***only the student's best work***, demonstrating the skills and competencies he or she has mastered. These should be presented professionally and be clearly captioned. ***Should not be thought as a scrapbook.*** Potential employers are only interested in the very best examples.

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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 Forensic Science 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 Criminal Justice, 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
4/18/22 Date	4/18/22 Date

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

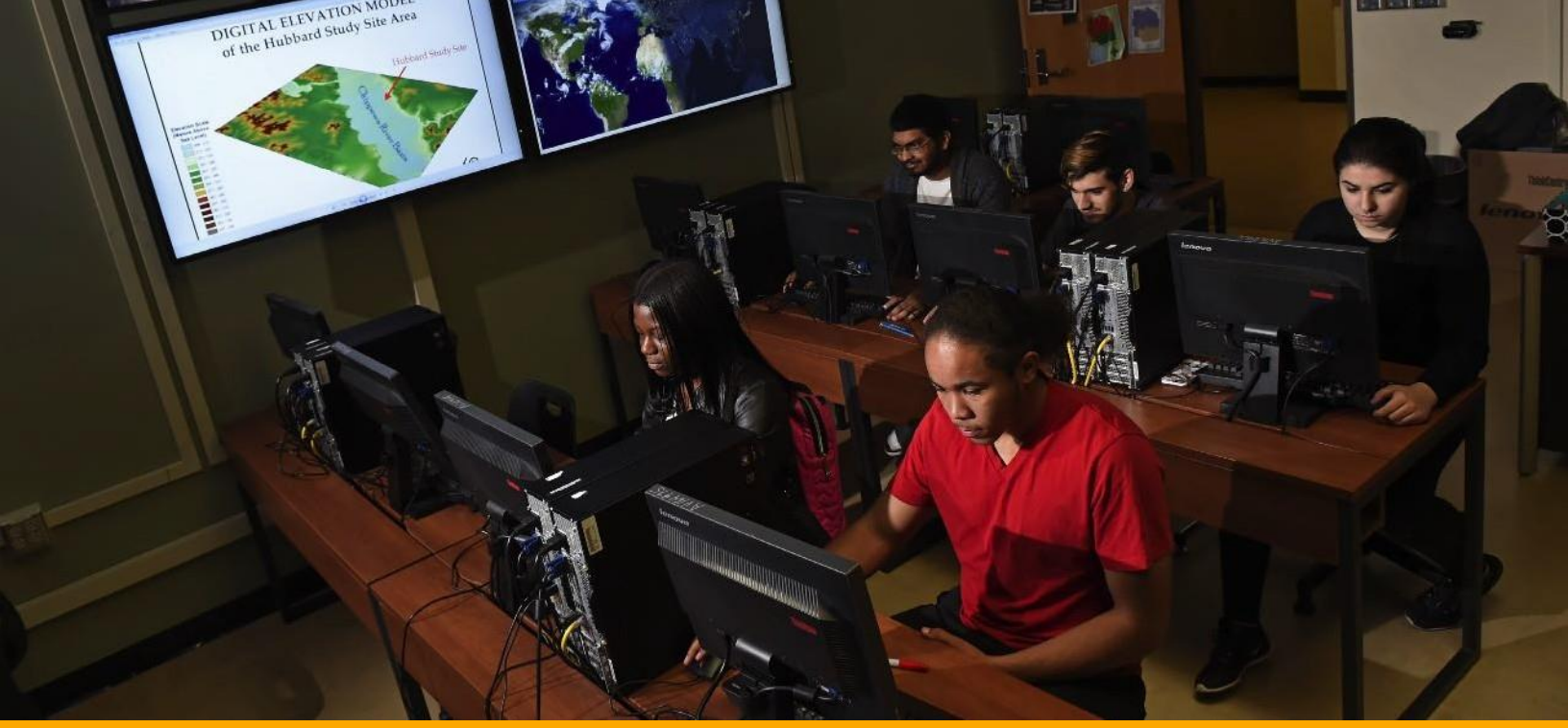
Recommendations for work-based learning should be included in the self-study report and reviewed by the external committee.

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

Return to TOC



SYRACUSE CITY SCHOOL DISTRICT

Career and Technical Education

CTE

Internship Handbook

Preparing today's students for tomorrow's careers.

Table of Contents

Syracuse City School District

Career and Technical Education Internship

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 Universityreport, 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 monitoredby 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 thetraditional classroom learning. Work based learning activitiespromote 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 skillsdevelopment. 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 assessstudent performance
- Develop career ready practices and provideopportunities for reflection
- Be supported and documented by appropriateplanning 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 ofpromoting:

- The exploration of and experience in a field ofinterest
- Exposure to a wide range of careers and jobs within anindustry
- Opportunities to develop, practice and demonstratenew skills
- The acquisition of occupational knowledge and awareness of the skills and education needed to besuccessful in the industry

Career & Technical Program/Teacher Guidelines

Legal Requirements of SCSD CTE Internship Program

All Career and Technical Education Internship Programshave 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 andneeds.

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) laborlaws and regulations
- Employer is provided a Certificate of Insurance fromschool 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 perNYSDOL 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'svisitors or volunteer insurance.
- Worksite must be in compliance with OccupationalSafety and Health Administration (OSHA) regulations. Health and safety instruction/trainingappropriate 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 identifiesthe 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 probationwill participate in the internship.
- Employment Certificate (Working Papers) for students provide verification that a student under age18 is eligible for employment. The student, employer,and school must complete the form. Employment certificates are obtained at the high school – typicallythe 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 bemaintained for each student.
- An intern evaluation will be done by the CTE teacher before the internship, at the midpoint of the internshipand at the end of the internship. This same form will be completed by the on-site supervisor in the midpointand 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 thatsafe practices are stressed and followed. However, it is impossible to guarantee that no injuries resulting in medicalexpenses 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 appropriatesafety training before beginning their internship.
2. Any sites used for SCSD CTE internships will bereviewed 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 asdefined by the USDOL.
4. Provisions for student safety must be included as partof 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 ofEmployer

Before

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

During

- Provide student with a Work Site Orientation toorganization and any required training
- Train student intern for your work site, including allwork 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 adequatetasking to maximize learning
- Meet with coordinator/teacher and student to decideon an ongoing communications strategy
- Evaluate intern work and provide constructivecriticism
- Assist student in working toward learning outcomes
- Coordinate student schedule, approve weeklytimesheets
- Communicate successes and opportunities at the workplace that the teacher can use to enhance the value of classroom connections
- Complete a student evaluation midway throughinternship and discuss with student

After

- Complete a final evaluation of the student
- Hold debriefing session and review performance withthe 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

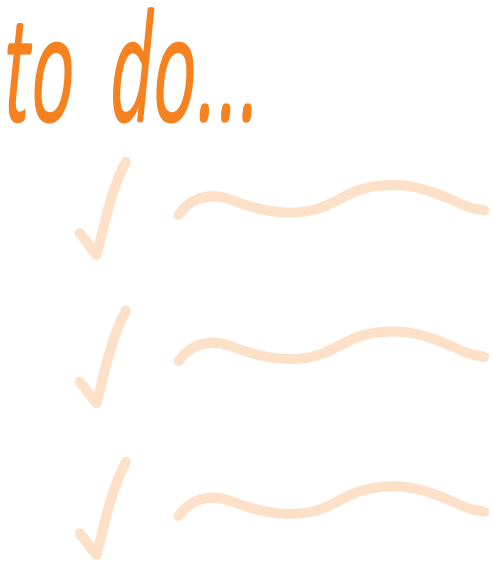
Expectations and Responsibilities of Students

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 securityconcerns
- Perform all duties, jobs and assigned tasks; treatinternship like a real job
- Maintain regular work schedule and notify supervisor in advance of any vacation/appointments
- Track you hours as instructed on Weekly Timesheet
- Develop skill specific learning outcomes with yourworksite supervisor
- Participate in ongoing reflection journal activitiesand skill building classroom assignments
- Communicate with your teacher/coordinator andworksite supervisor if issues arise
- Keep copies of all necessary paperwork (work journal, training plan, Weekly Time Log/Record ofAttendance, and evaluations)



After

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

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

- ☐ Obtain NYSED Application for Employment Certificate (usuallyavailable in school counseling office, application attached)
- ☐ A written Memorandum of Agreement is in effect between thecooperating business, the education agency, and signed by student and parents (**Form #1**)
- ☐ Return Internship Application (**Form #2**) and all permission slipswith appropriate signatures
- ☐ Develop skill specific learning outcomes with your worksitesupervisor
- ☐ Meet with your teacher/coordinator and worksite supervisor tofinalize an Internship Training Plan for the internship (**Form #4**)
- ☐ Attend orientation at the worksite (**Form #7**)
- ☐ Observe all workplace rules and regulations particularly thoseapplicable to safety and security concerns
- ☐ Perform all duties, jobs and assigned tasks; treat internship like areal job
- ☐ Maintain regular work schedule and notify supervisor in advanceof any vacation/appointments
- ☐ Track you hours as instructed on time log/record of attendance(**Form #8**)
- ☐ Participate in ongoing reflection activities and skill buildingclassroom 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/Recordof 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

AT-17
Rev. 5/10

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.

THIS APPLICATION DOES NOT AUTHORIZE EMPLOYMENT

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 …… ……
[Name of School] [Address]

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]

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-driver 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 <u>on days followed by a school day</u> without written consent of parent of guardian <u>and</u> 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 <u>on days not followed by a school day</u> 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 #
INSURED	INSURER A :	
	INSURER B :	
	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	$
	☐ COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
	☐ CLAIMS-MADE ☐ OCCUR						MED EXP (Any one person)	$
	500,000 Retained						PERSONAL & ADV INJURY	$
							GENERAL AGGREGATE	$
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$
	☐ POLICY ☐ PRO-JECT ☐ LOC							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	☐ ANY AUTO						BODILY INJURY (Per person)	$
	☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	☐ HIRED AUTOS ☐ NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
	☐ **UMBRELLA LIAB** ☐ OCCUR						EACH OCCURRENCE	$
	☐ **EXCESS LIAB** ☐ CLAIMS-MADE						AGGREGATE	$
	☐ DED ☐ RETENTION $							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N						☐ WC STATU-TORY LIMITS ☐ OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☐ **(Mandatory in NH)**	N / A					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

Teacher

Employe

Student

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

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)

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

THE SCHOOL AGREES THAT IT WILL:

1. Carry the insurance listed for students during class activities including internships, job experiences and workplacement.
2. 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.
3. 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.
4. Provide the STUDENT with safety instructions correlated by the EMPLOYER with on-the-job training.
5. Review with the Student and the Employer their respective responsibilities and obligations while participating in theProgram.

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

1. the student's progress
2. any misunderstandings
3. 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 partyupon 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

Teacher

Student

Syracuse City School District

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

CTE Internship Program Application Form

(Form #2)

Personal Information

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 Home Cell	
Primary Parent/ Guardian Email			
Secondary Parent/ Guardian Name		Secondary Parent/ Guardian's Telephone Number Home Cell	
Secondary Parent/ Guardian Email			
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

Please check applicable box: ☐ Fixed Schedule ☐ Schedule will vary

Sports, Clubs, and Other Activities

Transportation

Please check the appropriate response

Do you have a license? ☐ Yes ☐ No	If YES, which license do you have? ☐ Full License ☐ Junior License
Do you drive to school? ☐ Yes ☐ No	License Number:

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

☐ Public Transportation ☐ Other

Teacher

Student

(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	Student's Signature	Date

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Teacher

Employer

Student

Syracuse City School District

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 =

ZEST				
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			

Teacher

Employer

Student

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'sCompensation

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 skills necessary for careers.
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.

(Form #4 Continued)

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.	

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

Teache

Employe

Studen

SAFETY TRAINING	DATE OF SAFETY TRAINING	ACHIEVEMENT LEVEL AND COMMENTS 1. Mastered safety training instruction. 2. Needs more safety training at worksite. 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 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

Teacher

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 studentsare not due any wages per New York State Department of Labor.

_____	_____ / /
Student	Date
_____	_____ / /
CTE Teacher/ WBL Coordinator	Date
_____	_____ / /
Worksite Representative/ Mentor	Date

Teacher

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	☐	/ /
Safe Serv	☐	/ /
First Aid	☐	/ /
CPR	☐	/ /
Other	☐	/ /

Teacher
Employer
Student

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

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 procedures

Employer/training sponsor _____ Date ____/____/____

Student _____ Date ____/____/____

CTE Teacher/WBL Coordinator _____ Date ____/____/____

Teacher

Employer

Student

Syracuse City School District

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

The best thing about my experience was… _____

_____

The worst thing about my experience was… _____

_____

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

_____

Other comments… _____

Syracuse City School District

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

SCSD CTE Internship Mentor Program Evaluation (Form #10)

Student Name _____ SCSD School _____

Interning Location _____

Supervisor/ Mentor Name _____ Date ____/____/____

Internship Preparation

- ☐ Exceptiona
- ☐ lAdequate
- ☐ Inadequate
- ☐

Modes of Communication with SCSD Personnel

- ☐ In-Person
- ☐ Email
- ☐ Phone
- ☐

Amount of Communication with SCSD Personnel

- ☐ Exceptionally
- ☐ goodAppropriate
- ☐ Too
- ☐ muchToo
- ☐ little

Suggestions for improvement: _____

Additional comments: _____

Return to CTE teacher: _____
CTE Teacher Email

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 other legally 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 Officer
Syracuse 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

Forensic Science

Industry Based Skill Standards

Proficiency Definitions

NA = Not Applicable **1 = Developing** **2 = Basic** **3 = Proficient** **4 = Mastery**

	9th	10th	11th	12th
History of Forensic Science				
Understands the scientific, social, and legal development of Forensic Science. Identify organizations responsible for administrating Forensic Investigation.				
Personal and Professional Goal Setting and Success				
Defines principles that contribute to personal and professional success. Embody characteristics of a healthy, positive, and successful attitude.				
Effective Communication				
Demonstrates effective communication skills both verbally and in writing. Collaborates effectively and politely. Understands how to manage workplace conflicts and challenges.				
Criminal Justice System (CJS)				
Explains the difference between criminal law and civil law. Identify the major pillars of CJS. Demonstrates knowledge of how the arrest process has impact on the trial process.				
Safety and Protection				
Understands proper safety protocols in the laboratory. Can identify potential safety hazards in the field and explain standard operating procedures on a crime scene.				
Tools and Equipment				
Evaluate appropriate methods and/or tools for collecting data. use laboratory tools connected to computers for observing, measuring, recording, and processing data.				
Crime Scene Investigation				
Efficiently process a crime scene in a systematic, orderly method. Collect and document evidence to ensure credibility of the investigation.				
Photography & Microscopy				
Operate photography and microscopic equipment to capture evidence at a macroscopic and microscopic scale. Appropriately handle, focus and operate machinery.				
Research and Inquiry				
Solve meaningful problems through the practices of engineering design. Conduct an investigation to produce data. Construct a scientific explanation based on valid and reliable evidence.				

	9th	10th	11th	12th
Genetics and DNA Analysis				
Apply blood type analysis to genetic inheritance patterns. Utilize Polymerase Chain Reaction techniques to compare short tandem repeat for DNA Analysis				
Measurement & Statistical Analysis				
Demonstrate the correct techniques for measurement and collecting data use mathematics to represent physical variables and their relationships, and to make quantitative predictions.				
Fingerprinting				
Identify fingerprinting patterns, subclasses, and minutiae. Compare and analyze evidence. Lift a fingerprint from a variety of surfaces using appropriate technique.				
Serology & Blood Spatter				
Identify fingerprinting patterns, subclasses, and minutiae. Compare and analyze evidence. Lift a fingerprint from a variety of surfaces using appropriate technique.				
Anatomical & Skeletal Analysis				
Identify the major bones in the human skeleton. Interpret markings and conditions to identify sex, age, height, health and injury. Identify major body systems.				
Death Investigation				
Complete an autopsy investigation. Determine the cause of death using evidence from an autopsy. Identify common insects associated with decomposition and diagram their life cycles.				
Toolmarks and Ballistics				
Explain the individual characteristics of tool marks. Identify characteristics of bullet and cartridge cases. Analyze and evaluate various kinds of toolmark and ballistic evidence.				
Forensic Toxicology and Chemistry				
Classify the types of drugs based on the physiological effects on the body. Complete chromatographic, spectroscopic and analytical techniques to identify unknown toxins and substances.				
Forensic Psychology				
Locate and identify the major organs of the nervous system. Identify psychological testing processes and procedures used to study the criminal mind				

College Credits Attained		
Onondaga Community College CJ 101: Criminal Justice Systems	3 CH	
Syracuse University Project Advance: Forensic Chemistry 113	4 CH	
Onondaga Community College CJ 215: Criminal Law	3 CH	

Inquiry & Research	Year
PSLA/MOST Science Fair	
PSLA/MOST Science Fair	
PSLA/MOST Science Fair	

Work-Based Learning	Hours
Agency:_____	
Agency:_____	
Agency:_____	

Forensic Science
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