

Forensic Science Supplemental Program Resources



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Introduction

This document provides supplemental information for the Forensic Science program of study. It may be updated or revised as the base program of study, or complementary programs, are updated, added, or removed. Please contact the appropriate Education Programs Professional with any questions.

The Program of Study includes the approved courses, complementary courses, alignment(s) to industry, postsecondary options, and additional information.

The Equipment List for the Forensic Science program of study is included and, if applicable, additional items used only in the complementary course(s) are noted.

The Crosswalks and Alignments connect and support the Forensic Science standards for the Law, Public Safety, Corrections and Security program of study. Complementary course standards are not listed in the crosswalks and alignments.

Program Structure for Forensic Science

The core course sequencing is provided in the following table. Complementary Courses are available and provided later in this document. The following courses provide a completed program of study.

Core Course Sequence (R) with Lab Course(s) (C)

Required/ Complementary	Course Title	Abbreviated Name	CIP Code	SCED Subject Area	SCED Course Identifier	SCED Course Level	SCED Unit Credit	SCED Course Sequence	SCED Course Number
R	Forensic Science I	FORENSIC SCI I	43.04606	15	055	G	1.00	12	15055G1.0012
R	Forensic Science II	FORENSIC SCI II	43.0406	15	055	G	1.00	22	15055G1.0022

The complementary courses are provided in the following table. **The qualifying program of study must be completed prior to enrolling in the complementary course(s).** A program does not have to utilize the complementary courses for students to complete their program of study.

Required/ Complementary	Course Title	Abbreviated Name	CIP Code	SCED Subject Area	SCED Course Identifier	SCED Course Level	SCED Unit Credit	SCED Course Sequence	SCED Course Number
C	Forensic Science Advanced Studies	FORENSIC SCI AS	43.0406	15	055	E	1.00	11	15055E1.0011
C	Industry-Recognized Credential – Forensic Science	IRC- FORENSIC SCI	43.0406	15	999	E	1.00	1	15999E.0011
C	CTE Work Experience - Law Public Safety Corrections and Security	WORK EXPER LAW	99.0012	15	998	G	1.00	11	15998G1.0011

CIP Code – Classification of Instructional Programs (CIP) Codes

SCED – School Courses for the Exchange of Data that populates the State Infinite Campus System and the System for Accountability Information in Nevada (SAIN)

Course Descriptions

Forensic Science I

Prerequisite: None

This course introduces the principles and procedures employed in criminal and civil investigations. Areas of study include history of forensic science, types of evidence, careers, legal and ethical issues, and exploring crime scenes. Emphasis will be put on gathering information that is used to collect evidence, practice unbiased testimony, crime scene photography, and crime scene procedures. The appropriate use of technology and industry-standards equipment is an integral part of this course.

Forensic Science II

Prerequisite: Forensic Science I

This course is a continuation of Forensic Science I. This course allows for students interested in the forensic science field to develop their knowledge and skills in principles and procedures related to laboratory fundamentals and forensic disciplines. Areas of study include biological and chemical hazards, utilization of lab equipment, lab accreditation, examination of evidence, and fingerprinting processes. The appropriate use of technology and industry-standards equipment is an integral part of this course.

Forensic Science Advanced Studies

Prerequisite: Completion of Forensic Science Program of Study

This course is offered to students who have completed all content standards in a program and desire to pursue advanced study through investigation and in-depth research. Students are expected to work independently or in a team and consult with their supervising teacher for guidance. The supervising teacher will give directions, monitor, and evaluate the students' topic of study. Coursework may include various work-based learning experiences such as internships and job shadowing, involvement in a school-based enterprise, completion of a capstone project, and/or portfolio development. This course may be repeated for additional instruction and credit.

Industry-Recognized Credential – Forensic Science

Prerequisite: Completion of Forensic Science Program of Study

This course is offered to students who have completed all content standards in a program of study and desire to pursue an Industry-Recognized Credential that aligns with the standards and skills associated with the Forensic Science Program of Study. This course is designed to expand the students' opportunities to pursue certification aligned with employment standards in the industry aligned with this program of study. The supervising teacher will provide instruction aligned with the certification requirements, monitor progress toward certification, and provide the students with appropriate testing or certification opportunities associated with the intended Industry-Recognized Credential that is the subject of the course. This course may be repeated for additional instruction and credit.

CTE Work Experience – Law, Public Safety, Corrections, and Security

Prerequisite: Completion of Level 2 course in the qualifying program of study

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth CTE work experience that applies the processes, concepts, and principles as described in the classroom instruction. This course will encourage students to explore and develop advanced skills through work-based learning directly related to the program of study. The course must follow NAC 389.562, 389.564, 389.566 regulations.

Equipment List

This recommended list is based upon a classroom size of 25 students. All costs are estimated and may be adjusted once verified and justified by districts with current quotes. No specific equipment vendor or brand names are endorsed due to various possibilities, but school districts should consult with stakeholders to ensure industry-recognized equipment and software are purchased. The intent of this list is to provide school districts with guidance on the equipment needed to implement the state standards for a Forensic Science program.

CTE Classroom Equipment

Total: \$930

QTY	ITEM DESCRIPTION	UNIT	TOTAL
2	Storage Cabinets (36" x 12" x 72") (lockable)	\$300	\$600
1	Fire Extinguisher	\$130	\$130
1	First Aid Kit	\$100	\$100
1	Sink with Soap Dispenser	\$100	\$100

Program Equipment

Total: \$28,500

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Computers	\$1,000	\$25,000
1	Technology Storage/Charging System (optional)	\$2,000	\$2,000
1	Disarticulated Skeleton	\$1,500	\$1,500

Instructional Materials

Total: \$3,000

QTY	ITEM DESCRIPTION	UNIT	TOTAL
25	Student Textbooks (Approved by NDE) CTE Instructional Materials list can be found here .	\$100	\$2,500
1	Teacher Textbook Edition and Resources	\$500	\$500

Instructional Supplies

Total: \$12,225

QTY	ITEM DESCRIPTION	UNIT	TOTAL
5	Digital Cameras	\$250	\$1250
10	Microscopes	\$250	\$2500
1	Biohazard Waste Can	\$50	\$50
1	Biohazard Sharps Container	\$25	\$25
Varies	Document Supplies (evidence logs, notebooks, pens, tags, markers, etc.)	\$1,000	\$1,000
Varies	Fingerprinting Supplies	\$1,000	\$1,000

Supplemental Program Resources

2021

QTY	ITEM DESCRIPTION	UNIT	TOTAL
Varies	Personal Protective Equipment (PPE) (gloves, barriers, safety glasses, etc.)	\$1,000	\$1,000
Varies	Computer Accessories (cases, covers, etc.)(optional)	\$500	\$500
Varies	Digital Camera Supplies (batteries, memory cards, etc.)	\$500	\$500
Varies	Biological Identification Kits	\$500	\$500
Varies	Evidence Bags and Storage Containers	\$500	\$500
Varies	Firearm Casting Supplies	\$500	\$500
Varies	Sanitary Supplies (hand sanitizer, disinfectant soap, sanitary wipes, biohazard bags, etc.)	\$500	\$500
Varies	Stains and Reagents	\$500	\$500
Varies	Entomology Collections for Identification	\$450	\$450
Varies	Crime Scene Reconstruction	\$400	\$400
Varies	Dental Models	\$300	\$300
Varies	Glassware and Pipettes	\$250	\$250
Varies	Hematology and Toxicology Kits	\$250	\$250
Varies	Laser and Light Sources	\$250	\$250

Other

Total:

\$990

QTY	ITEM DESCRIPTION	UNIT	TOTAL
1	Occupational Safety and Health Administration (OSHA) Instructor Training	\$300	\$300

Category Totals:

Classroom Equipment	\$930
Program Equipment	\$28,500
Instructional Materials	\$3,000
Instructional Supplies	\$12,225
Other	\$300
Estimated Program Total	\$44,955

Crosswalks and Alignments for Program of Study Standards

Crosswalks and alignments are intended to assist the teacher make connections for students between the technical skills within the program and academic standards. The crosswalks and alignments are not intended to teach the academic standards but to assist students in making meaningful connections between their CTE program of study and academic courses. The crosswalks are for the required program of study courses, not the complementary courses.

Crosswalks (Academic Standards)

The crosswalks of the Forensic Science Standards show connections with the Nevada Academic Content Standards. The crosswalk identifies the performance indicators in which the learning objectives in the Forensic Science program connect with and support academic learning. The performance indicators are grouped according to their content standard and are crosswalked to the Nevada Academic Content Standards in English Language Arts, Mathematics, and Science.

Alignments (Mathematical Practices)

In addition to connections with the Nevada Academic Content Standards for Mathematics, many performance indicators support the Mathematical Practices. The following table illustrates the alignment of the Forensic Science Standards Performance Indicators and the Mathematical Practices. This alignment identifies the performance indicators in which the learning objectives in the Forensic Science program connect with and support academic learning.

Alignments (Science and Engineering Practices)

In addition to connections with the Nevada Academic Content Standards for Science, many performance indicators support the Science and Engineering Practices. The following table illustrates the alignment of the Forensic Science Standards Performance Indicators and the Science and Engineering Practices. This alignment identifies the performance indicators in which the learning objectives in the Forensic Science program connect with and support academic learning.

Crosswalks (Common Career Technical Core)

The crosswalks of the Forensic Science Standards show connections with the Common Career Technical Core. The crosswalk identifies the performance indicators in which the learning objectives in the Forensic Science program connect with and support the Common Career Technical Core. The Common Career Technical Core defines what students should know and be able to do after completing instruction in a program of study. The Forensic Science Standards are crosswalked to the Law, Public Safety, Corrections and Security Career Cluster™ and the Law Enforcement Services Career Pathway.

Crosswalk of Forensic Science Program of Study Standards and the Nevada Academic Content Standards

English Language Arts: Language Standards

Nevada Academic Content Standards		Performance Indicators
L.11-12.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	3.3.3
L.11-12.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	3.3.3

English Language Arts: Reading Standards for Informational Text

Nevada Academic Content Standards		Performance Indicators
RI.11-12.3	Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.	3.1.1, 4.1.6, 5.3.1, 5.3.2 6.5.1, 8.1.2, 8.2.2, 8.5.2

English Language Arts: Reading Standards for Literacy in Science and Technical Subjects

Nevada Academic Content Standards		Performance Indicators
RST.11-12.2	Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.	2.2.2, 6.1.5, 6.2.3, 6.3.1 6.3.2, 6.3.6, 6.4.4
RST.11-12.3	Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.	4.1.1, 4.3.5, 8.2.3, 4.2.1
RST.11-12.7	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.	2.1.4, 2.2.1, 2.2.3, 2.3.4 2.4.1, 2.4.2, 3.1.1, 3.1.3 3.2.2, 5.3.1, 5.3.2, 6.5.1 8.1.2, 8.2.2, 8.5.2
RST.11-12.8	Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.	2.2.3, 4.1.5, 6.1.2, 6.2.2 6.3.3, 6.4.2, 7.2.2
RST.11-12.9	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.	2.1.4, 2.1.5, 2.2.1, 2.3.1 2.3.4, 2.4.1, 2.4.2, 3.1.3 3.2.2, 4.1.1, 4.1.5, 4.2.3 4.2.6, 4.3.1, 4.3.3, 4.3.5 5.1.1, 5.2.1, 5.3.2, 6.1.1 6.1.2, 6.1.3, 6.2.1, 6.2.2 6.2.4, 6.3.3, 6.3.4, 6.4.1 6.4.2, 6.5.1, 7.2.1, 7.2.2 7.2.3, 8.1.2, 8.1.3, 8.2.2 8.5.2

English Language Arts: Speaking and Listening Standards

Nevada Academic Content Standards		Performance Indicators
SL.11-12.1a	Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.	2.1.4, 2.2.3, 2.3.1, 2.4.2 3.1.1, 3.1.3, 3.2.2, 4.1.5 4.2.1, 4.2.3, 4.2.6, 5.1.1 5.3.1, 5.3.2, 6.1.2, 6.2.2 6.2.4, 6.4.2, 6.5.1, 7.2.1 7.2.2, 8.1.1, 8.1.2, 8.1.3 8.2.2, 8.3.1, 8.5.1, 8.5.2
SL.11-12.1d	Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.	4.1.1, 7.2.3
SL.11-12.2	Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.	2.1.4, 2.2.3, 2.4.2, 3.1.1 3.1.3, 3.2.2, 4.1.5, 4.2.1 5.3.1, 5.3.2, 6.1.2, 6.2.2 6.4.2, 6.5.1, 7.2.2, 8.1.1, 8.1.2, 8.3.1
SL.11-12.3	Evaluate a speaker’s point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.	8.4.2
SL.11-12.4	Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.	2.1.4, 2.2.1, 2.2.3, 2.4.2 3.1.3, 3.2.2, 4.1.5, 4.2.1 4.2.3, 4.2.6, 5.1.1, 5.3.1 5.3.2, 6.1.2, 6.1.3, 6.2.2 6.2.4, 6.4.2, 6.5.1, 7.2.1 7.2.2, 8.1.3
SL.11-12.6	Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 11–12 Language standards 1 and 3 on page 54 for specific expectations.)	7.2.3

English Language Arts: Writing Standards

Nevada Academic Content Standards		Performance Indicators
W.11-12.3	Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.	6.1.6, 6.2.5, 6.3.7, 6.4.5 8.2.3

English Language Arts: Writing Standards for Literacy in Science and Technical Subjects

Nevada Academic Content Standards		Performance Indicators
WHST.11-12.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	4.2.2, 4.2.3, 4.2.7, 5.1.1
WHST.11-12.7	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	2.1.4, 2.2.3, 2.3.4, 2.4.1 2.4.2, 3.1.3, 3.2.2, 4.1.6 6.1.4, 8.4.2

Nevada Academic Content Standards		Performance Indicators
WHST.11-12.8	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.	2.1.5, 2.2.1, 2.2.2, 2.3.1 3.1.1, 4.1.5, 4.1.6, 4.2.3 4.2.7, 4.3.1, 4.3.3, 5.3.1 5.3.2, 6.1.1, 6.1.2, 6.1.3 6.1.5, 6.2.1, 6.2.2, 6.2.3 6.2.4, 6.3.1, 6.3.2, 6.3.3 6.3.4, 6.3.6, 6.4.1, 6.4.2 6.4.4, 6.5.1, 7.2.1, 7.2.2 8.1.2, 8.1.3, 8.2.2, 8.5.2

Math: Geometry – Congruence

Nevada Academic Content Standards		Performance Indicators
GCO.A.1	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.	4.2.1, 4.2.4

Math: Geometry – Modeling with Geometry

Nevada Academic Content Standards		Performance Indicators
GMG.A.1	Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).	4.2.4, 4.2.6

Science HS: From Molecules to Organisms - Structures and Processes

Nevada Academic Content Standards		Performance Indicators
HS-LS1-2	Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.	9.5.1
HS-LS1-7	Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.	9.5.2

Science HS: Earth’s Place in the Universe

Nevada Academic Content Standards		Performance Indicators
HS-LS4-5	Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.	9.9.4

Alignment of Forensic Science Standards and the Mathematical Practices

Mathematical Practices	Forensic Science Performance Indicators
1. Make sense of problems and persevere in solving them.	4.1.1
2. Reason abstractly and quantitatively.	6.2.3
3. Construct viable arguments and critique the reasoning of others.	8.1.1, 8.5.2
4. Model with mathematics.	4.2.1, 4.2.4
5. Use appropriate tools strategically.	5.2.1, 6.3.5
6. Attend to precision.	4.3.3, 6.3.6
7. Look for and make use of structure.	4.2.6, 6.5.2-6.5.5
8. Look for and express regularity in repeated reasoning.	6.1.5

Alignment of Forensic Science Standards and the Science and Engineering Practices

Science and Engineering Practices	Forensic Science Performance Indicators
1. Asking questions (for science) and defining problems (for engineering).	
2. Developing and using models.	6.3.1, 6.5.1-6.5.5
3. Planning and carrying out investigations.	6.4.1, 6.4.4 8.3.3
4. Analyzing and interpreting data.	6.1.6, 6.2.5, 6.4.5
5. Using mathematics and computational thinking.	4.2.1, 4.2.4
6. Constructing explanations (for science) and designing solutions (for engineering).	6.1.3
7. Engaging in argument from evidence.	8.5.2
8. Obtaining, evaluating, and communicating information.	7.2.4, 7.2.5

Crosswalks of Forensic Science Standards and the Common Career Technical Core

Law, Public Safety, Corrections and Security Career Cluster	Performance Indicators
1. Analyze the nature and scope of the Law, Public Safety, Corrections and Security Career Cluster and the role law, public safety, corrections and security play in society and the economy.	2.2.3, 2.4.1, 2.4.2
2. Formulate ideas, proposals, and solutions to ensure effective and efficient delivery of Law, Public Safety, Corrections and/or Security services.	3.1.1-3.1.4, 5.1.1-5.1.5
3. Assess and implement measures to maintain safe and healthy working conditions in a Law, Public Safety, Corrections and/or Security environment.	4.1.3, 4.1.4, 5.1.5.1.5
4. Conduct Law, Public Safety, Corrections, and Security work tasks in accordance with employee and employer rights, obligations, and responsibilities, including occupational safety and health requirements.	3.1.3.1.2; 3.2.1; 4.1.4, 5.1.5.1.5
5. Analyze the various laws, ordinances, regulations, and organizational rules that apply to careers in Law, Public Safety, Corrections, and Security.	2.2.3; 3.1.3.1.4
6. Describe various career opportunities and means to those opportunities in each of the Law, Public Safety, Corrections and Security Career pathways.	2.2.3; 2.4.1, 2.4.2

Law Enforcement Services Career Pathway	Performance Indicators
1. Demonstrate effective communication skills (e.g., writing, speaking, listening and nonverbal communication) required in law enforcement.	3.3.3, 6.1.6, 6.3.7, 6.4.5
2. Demonstrate proficiency in the operation of communications equipment used in a Forensic Science center.	3.2.2-3.3.3
3. Utilize anger and conflict management strategies to resolve problems in law enforcement settings.	3.3.1-3.3.4
4. Model behaviors that exhibit integrity and commitment to a code of conduct and ethics for law enforcement professionals.	3.2.1; 3.3.1-3.3.4
5. Analyze the impact of federal, state, and local laws on law enforcement procedures.	2.2.1-2.2.3, 3.1.1; 3.1.3-3.1.4
6. Execute established procedures to avoid the violation of the rights guaranteed by the Fourth, Fifth, Sixth and Fourteenth Amendments.	3.1.1; 3.1.3-3.1.4, 4.1.6
7. Manage crime and loss prevention programs in collaboration with the community.	2.2.3
8. Explain the appropriate techniques for managing crisis situations in order to maintain public safety.	3.3.1-3.3.3
9. Evaluate for the signs of domestic violence, child abuse and neglect.	4.1.1-4.1.2; 4.2.7
10. Demonstrate the routine day-to-day tasks conducted by various law enforcement agencies.	2.2.1-2.2.3
11. Describe law enforcement protocols and procedures designed to handle incidents related to homeland security, terrorism, and other disaster situations.	2.2.1-2.2.3
12. Demonstrate the procedures to properly protect, document and process the crime scene and all related evidence.	4.1.4.1.8; 4.2.1-4.2.7
13. Describe the behavioral symptoms of drug use and the inherent dangers associated with handling dangerous drugs.	3.3.1-3.3.3
14. Demonstrate procedures to assist individuals requiring special assistance from law enforcement personnel.	4.1.3-4.1.4, 6.2.1-6.2.3