FORENSIC SCIENCE
CURRICULUM FRAMEWORK

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INTRODUCTION

The Nevada CTE Curriculum Frameworks are a resource for Nevada's public and charter schools to design, implement, and assess their CTE programs and curriculum. The content standards identified in this document are listed as a model for the development of local district programs and curriculum. They represent rigorous and relevant expectations for student performance, knowledge, and skill attainment which have been validated by industry representatives.

The intent of this document is to provide a resource to districts as they develop and implement CTE programs and curricula.

This program ensures the following thresholds are met:

- The CTE course and course sequence teaches the knowledge and skills required by industry through applied learning methodology and, where appropriate, work-based learning experiences that prepare students for careers in high-wage, high-skill and/or high-demand fields. Regional and state economic development priorities shall play an important role in determining program approval. Some courses also provide instruction focused on personal development.
- The CTE course and course sequence includes leadership and employability skills as an integral part of the curriculum.
- The CTE course and course sequence are part of a rigorous program of study and include sufficient technical challenge to meet state and/or industry-standards.

The CTE program components include the following items:

- Program of Study
- State Skill Standards
- Employability Skills for Career Readiness Standards
- Career Technical Student Organizations (CTSO)
- Curriculum Framework
- CTE Assessments:
    - Workplace Readiness Skills Assessment
    - End-of-Program Technical Assessment
- Certificate of Skill Attainment
- CTE Endorsement on a High School Diploma
- CTE College Credit

NEVADA DEPARTMENT OF EDUCATION
CURRICULUM FRAMEWORK FOR FORENSIC SCIENCE

PROGRAM TITLE:	**FORENSIC SCIENCE**
STATE SKILL STANDARDS:	**FORENSIC SCIENCE**
STANDARDS REFERENCE CODE:	**FOSCI**
CAREER CLUSTER:	**PUBLIC SAFETY**
CAREER PATHWAY:	**LAW ENFORCEMENT SERVICES**
PROGRAM LENGTH:	**3 LEVELS (L1, L2, L3C)**
PROGRAM ASSESSMENTS:	**FORENSIC SCIENCE** **WORKPLACE READINESS SKILLS**
CTSO:	**HOSA, SKILLSUSA**
GRADE LEVEL:	**9-12**
AVAILABLE INDUSTRY CERTIFICATIONS/LICENSES PROVIDERS:	**CPR/FIRST AID** **HIPAA**

PROGRAM PURPOSE

The purpose of this program is to prepare students for postsecondary education and employment in the Forensic Science industry.

The program includes the following state standards:

- Nevada CTE Skill Standards: Forensic Science
- Employability Skills for Career Readiness
- Nevada Academic Content Standards (alignment shown in the Nevada CTE Skill Standards):
    - Science (based on the Next Generation Science Standards)
    - English Language Arts (based on the Common Core State Standards)
    - Mathematics (based on the Common Core State Standards)
- Common Career Technical Core (alignment shown in the Nevada CTE Skill Standards)

CAREER CLUSTERS

The National Career Clusters™ Framework provides a vital structure for organizing and delivering quality CTE programs through learning and comprehensive programs of study (POS). In total, there are 16 Career Clusters in the National Career Clusters™ Framework, representing more than 79 Career Pathways to help students navigate their way to greater success in college and career. As an organizing tool for curriculum design and instruction, Career Clusters™ provide the essential knowledge and skills for the 16 Career Clusters™ and their Career Pathways.*

*Cite: National Association of State Directors of Career Technical Education Consortium. (2012). Retrieved from http://www.careertech.org/career-clusters/glance/careerclusters.html

PROGRAM OF STUDY

The program of study illustrates the sequence of academic and career and technical education coursework that is necessary for the student to successfully transition into postsecondary educational opportunities and employment in their chosen career path. (NAC 389.803)

PROGRAM STRUCTURE

The core course sequencing provided in the following table serves as a guide to schools for their programs of study. Each course is listed in the order in which it should be taught and has a designated level. Complete program sequences are essential for the successful delivery of all state standards in each program area.

FORENSIC SCIENCE Core Course Sequence	
FORENSIC SCIENCE	**LEVEL**
Forensic Science I	L1
Forensic Science II	L2
Forensic Science III	L3C

The core course sequencing with the complementary courses provided in the following table serves as a guide to schools for their programs of study. Each course is listed in the order in which it should be taught and has a designated level. A program does not have to utilize all of the complementary courses in order for their students to complete their program of study. Complete program sequences are essential for the successful delivery of all state standards in each program area.

FORENSIC SCIENCE Core Course Sequence with Complementary Courses	
FORENSIC SCIENCE	**LEVEL**
Forensic Science I	L1
Forensic Science II	L2
Forensic Science II LAB*	L2L
Forensic Science III	L3C
Forensic Science III LAB*	L3L
Forensic Science Advanced Studies*	AS

*Complementary Courses

STATE SKILL STANDARDS

The state skill standards are designed to clearly state what the student should know and be able to do upon completion of an advanced high school career and technical education (CTE) program. The standards are designed for the student to complete all standards through their completion of a program of study. The standards are designed to prepare the student for the end-of-program technical assessment directly aligned to the standards. (Paragraph (a) of Subsection 1 of NAC 389.800)

EMPLOYABILITY SKILLS FOR CAREER READINESS STANDARDS

Employability skills, often referred to as "soft skills", have for many years been a recognizable component of the standards and curriculum in career and technical education programs. The twenty-one standards are organized into three areas: (1) Personal Qualities and People Skills; (2) Professional Knowledge and Skills; and (3) Technology Knowledge and Skills. The standards are designed to ensure students graduate high school properly prepared with skills employers prioritize as the most important. Instruction on all twenty-one standards must be part of each course of the CTE program. (Paragraph (d) of Subsection 1 of NAC 389.800)

CURRICULUM FRAMEWORK

The Nevada CTE Curriculum Frameworks are organized utilizing the recommended course sequencing listed in the Program of Study and the CTE Course Catalog. The framework identifies the recommended content standards, performance standards, and performance indicators that should be taught in each course.

CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSOS)

To further the development of leadership and technical skills, students must have opportunities to participate in one or more of the Career and Technical Student Organizations (CTSOs). CTSOs develop character, citizenship, and the technical, leadership and teamwork skills essential for the workforce and their further education. Their activities are considered a part of the instructional day when they are directly related to the competencies and objectives in the course. (Paragraph (a) of Subsection 3 of NAC 389.800)

WORKPLACE READINESS SKILLS ASSESSMENT

The Workplace Readiness Skills Assessment has been developed to align with the Nevada CTE Employability Skills for Career Readiness Standards. This assessment provides a measurement of student employability skills attainment. Students who complete a program will be assessed on their skill attainment during the completion level course. Completion level courses are identified by the letter "C".
(e.g., Level = L3C) (Paragraph (d) of Subsection 1 of NAC 389.800)

END-OF-PROGRAM TECHNICAL ASSESSMENT

An end-of-program technical assessment has been developed to align with the Nevada CTE Skill Standards for this program. This assessment provides a measurement of student technical skill attainment. Students who complete a program will be assessed on their skill attainment during the completion level course. Completion level courses are identified by the letter "C". (e.g., Level = L3C)
(Paragraph (e) of Subsection 1 of NAC 389.800)

CERTIFICATE OF SKILL ATTAINMENT

Each student who completes a course of study must be awarded a certificate which states that they have attained specific skills in the industry being studied and meets the following criteria: A student must maintain a 3.0 grade point average in their approved course of study, pass the Workplace Readiness Skills Assessment, and pass the end-of-program technical assessment. (Subsection 4 of NAC 389.800)

CTE ENDORSEMENT ON A HIGH SCHOOL DIPLOMA

A student qualifies for a CTE endorsement on their high school diploma after successfully completing the following criteria: 1) successful completion of a CTE course of study in a program area, 2) successful completion of academic requirements governing receipt of a standard diploma, and 3) meet all requirements for the issuance of the Certificate of Skill Attainment. (NAC 389.815)

CTE COLLEGE CREDIT

CTE College Credit is awarded to students based on articulation agreements established by each college for the CTE program, where the colleges will determine the credit value of a full high school CTE program based on course alignment. An articulation agreement will be established for each CTE program designating the number of articulated credits each college will award to students who complete the program.

CTE College Credit is awarded to students who: (1) complete the CTE course sequence with a grade-point average of 3.0 or higher; (2) pass the state end-of-program technical assessment for the program; and (3) pass the Workplace Readiness Assessment for employability skills.

Pre-existing articulation agreements will be recognized until new agreements are established according to current state policy and the criteria shown above.

Please refer to the local high school's course catalog or contact the local high school counselor for more information. (Paragraph (b) of Subsection 3 of NAC 389.800)

ACADEMIC CREDIT FOR CTE COURSEWORK

Career and technical education courses meet the credit requirements for high school graduation (1 unit of arts and humanities or career and technical education). Some career and technical education courses meet academic credit for high school graduation. Please refer to the local high school's course catalog or contact the local high school counselor for more information. (NAC 389.672)

CORE COURSE:
RECOMMENDED STUDENT PERFORMANCE STANDARDS

COURSE TITLE:	**Forensic Science I**
ABBR. NAME:	**FORENSIC SCI I**
CREDITS:	**1**
LEVEL:	**L1**
CIP CODE:	**43.0106**
PREREQUISITE:	**None**
CTSO:	**HOSA, SkillsUSA**

COURSE DESCRIPTION

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 are 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.

TECHNICAL STANDARDS

CONTENT STANDARD 1.0 : EXPLORE FOUNDATIONS OF FORENSIC SCIENCE

Performance Standard 1.1 : **EXAMINE THE HISTORY OF FORENSIC SCIENCE**

Performance Indicators : 1.1.1-1.1.5

Performance Standard 1.2 : **UNDERSTAND THE ROLE OF FORENSIC SCIENCE IN THE CRIMINAL JUSTICE SYSTEM**

Performance Indicators : 1.2.1-1.2.3

Performance Standard 1.3 : **EXAMINE DIFFERENT TYPES OF EVIDENCE**

Performance Indicators : 1.3.1-1.3.4

Performance Standard 1.4 : **EXPLORE CAREERS IN FORENSIC SCIENCE**

Performance Indicators : 1.4.1-1.4.2

CONTENT STANDARD 2.0: EXAMINING LEGAL AND ETHICAL ISSUES IN FORENSIC SCIENCE

Performance Standard 2.1 : **EXAMINE LEGAL ISSUES**

Performance Indicators : 2.1. -2.1.5

Performance Standard 2.2 : **EXAMINE ETHICAL ISSUES IN FORENSIC SCIENCE**

Performance Indicators : 2.2.1-2.2.3

Performance Standard 2.3 : **MODEL PROFESSIONALISM**

Performance Indicators : 2.3.1-2.3.3

CONTENT STANDARD 3.0 : EXPLORE CRIME SCENE INVESTIGATIONS

Performance Standard 3.1 : **IDENTIFY AND UTILIZE CRIME SCENE PROCEDURES**

Performance Indicators : 3.1.1-3.1.7

Performance Standard 3.2 : **UTILIZE SCENE DOCUMENTATION**

Performance Indicators : 3.2.1-3.2.7

Performance Standard 3.3 : **EXAMINE EVIDENCE COLLECTION**

Performance Indicators : 3.3.1-3.3.5

EMPLOYABILITY SKILLS FOR CAREER READINESS STANDARDS

CONTENT STANDARD 1.0 : DEMONSTRATE EMPLOYABILITY SKILLS FOR CAREER READINESS

Performance Standard 1.1 : Demonstrate Personal Qualities and People Skills
Performance Indicators : 1.1.1-1.1.7
Performance Standard 1.2 : Demonstrate Professional Knowledge and Skills
Performance Indicators : 1.2.1-1.2.10
Performance Standard 1.3 : Demonstrate Technology Knowledge and Skills
Performance Indicators : 1.3.1-1.3.4

ALIGNMENT TO THE NEVADA ACADEMIC CONTENT STANDARDS*

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

Mathematics: Mathematical Practices
Geometry-Congruence
Geometry-Circles

Science: Nature of Science
Physical Science
Life Science
Earth and Space

***** Refer to the Forensic Science Standards for alignment by performance indicator

CORE COURSE:
RECOMMENDED STUDENT PERFORMANCE STANDARDS

COURSE TITLE:	**Forensic Science II**
ABBR. NAME:	**FORENSIC SCI II**
CREDITS:	**1**
LEVEL:	**L2**
CIP CODE:	**43.0106**
PREREQUISITE:	**Forensic Science I or Foundations of Public Safety**
CTSO:	**HOSA, SkillsUSA**

COURSE DESCRIPTION

Prerequisite: Forensic Science I or Foundations of Public Safety

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, examine of evidence, and fingerprinted processes. The appropriate use of technology and industry-standards equipment is an integral part of this course.

TECHNICAL STANDARDS

CONTENT STANDARD 4.0 : RECOGNIZE AND IMPLEMENT LABORATORY FUNDAMENTALS

Performance Standard 4.1 : **EXPLORE SAFETY**

Performance Indicators : 4.1.1-4.1.5

Performance Standard 4.2 : **RECOGNIZE AND UTILIZE LAB SKILLS**

Performance Indicators : 4.2.1-4.2.3

Performance Standard 4.3 : **UNDERSTAND QUALITY ASSURANCE**

Performance Indicators : 4.3.1-4.3.3

CONTENT STANDARD 5.0 : EXPLORE FORENSIC DISCIPLINES

Performance Standard 5.1 : **EXAMINE BIOLOGICAL EVIDENCE**

Performance Indicators : 5.1.1-5.1.6

Performance Standard 5.2 : **EXAMINE CHEMICAL EVIDENCE**

Performance Indicators : 5.2.1-5.2.5

Performance Standard 5.3 : **EXAMINE FINGERPRINT EVIDENCE**

Performance Indicators : 5.3.1-5.3.7

Performance Standard 5.4 : **EXAMINE FIREARM AND TOOL MARK EVIDENCE**

Performance Indicators : 5.4.1-5.4.5

Performance Standard 5.5 : **EXAMINE ADDITIONAL DISCIPLINES**

Performance Indicators : 5.5.1-5.5.4

EMPLOYABILITY SKILLS FOR CAREER READINESS STANDARDS

CONTENT STANDARD 1.0 : DEMONSTRATE EMPLOYABILITY SKILLS FOR CAREER READINESS

Performance Standard 1.1 : Demonstrate Personal Qualities and People Skills
Performance Indicators : 1.1.1-1.1.7
Performance Standard 1.2 : Demonstrate Professional Knowledge and Skills
Performance Indicators : 1.2.1-1.2.10
Performance Standard 1.3 : Demonstrate Technology Knowledge and Skills
Performance Indicators : 1.3.1-1.3.4

ALIGNMENT TO THE NEVADA ACADEMIC CONTENT STANDARDS*

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

Mathematics: Mathematical Practices
Geometry-Congruence
Geometry-Circles

Science: Nature of Science
Physical Science
Life Science
Earth and Space

***** Refer to the Forensic Science Standards for alignment by performance indicator

CORE COURSE:
RECOMMENDED STUDENT PERFORMANCE STANDARDS

COURSE TITLE:	**Forensic Science III**
ABBR. NAME:	**FORENSIC SCI III**
CREDITS:	**1**
LEVEL:	**L3C**
CIP CODE:	**43.0106**
PREREQUISITE:	**Forensic Science II**
PROGRAM ASSESSMENTS:	**FORENSIC SCIENCE** **WORKPLACE READINESS SKILLS**
CTSO:	**HOSA, SkillsUSA**

COURSE DESCRIPTION

Prerequisite: Forensic Science II

This course is a continuation of Forensic Science II. This course allows advanced forensic science students the opportunity to develop skills in courtroom proceedings and forensic specialties. Areas of study include legal proceedings, examination questioning, death investigations, anthropology, entomology and forensic psychology. Emphasis will be placed on criminal profiling, skeletal remains, pathology, and courtroom personnel. . The appropriate use of technology and industry-standards equipment is an integral part of this course. Upon successful completion of this course, students will have acquired entry-level skills for employment and be prepared for postsecondary employment.

CONTENT STANDARD 6.0 : UNDERSTAND COURTROOM PROCEEDINGS

Performance Standard 6.1 : **IDENTIFY COURTROOM PROCESSES**

Performance Indicators : 6.1.1-6.1.2

Performance Standard 6.2 : **DESCRIBE ROLE OF THE EXPERT WITNESS**

Performance Indicators : 6.2.1-6.2.5

CONTENT STANDARD 7.0 : EXPLORE FORENSIC SPECIALTIES

Performance Standard 7.1 : **EXPLORE DEATH INVESTIGATION**

Performance Indicators : 7.1.1-7.1.4

Performance Standard 7.2 : **EXPLORE FORENSIC ANTHROPOLOGY**

Performance Indicators : 7.2.1-7.2.3

Performance Standard 7.3 : **EXPLORE FORENSIC ENTOMOLOGY**

Performance Indicators : 7.3.1-7.3.3

Performance Standard 7.4 : **EXPLORE FORENSIC ODONTOLOGY**

Performance Indicators : 7.4.1-7.4.2

Performance Standard 7.5 : **EXPLORE FORENSIC PSYCHOLOGY**

Performance Indicators : 7.5.1-7.5.2

EMPLOYABILITY SKILLS FOR CAREER READINESS STANDARDS

CONTENT STANDARD 1.0 : DEMONSTRATE EMPLOYABILITY SKILLS FOR CAREER READINESS

Performance Standard 1.1 : Demonstrate Personal Qualities and People Skills
Performance Indicators : 1.1.1-1.1.7
Performance Standard 1.2 : Demonstrate Professional Knowledge and Skills
Performance Indicators : 1.2.1-1.2.10
Performance Standard 1.3 : Demonstrate Technology Knowledge and Skills
Performance Indicators : 1.3.1-1.3.4

ALIGNMENT TO THE NEVADA ACADEMIC CONTENT STANDARDS*

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

Mathematics: Mathematical Practices
Geometry-Congruence
Geometry-Circles

Science: Nature of Science
Physical Science
Life Science
Earth and Space

***** Refer to the Forensic Science Standards for alignment by performance indicator

COMPLEMENTARY COURSE(S):

Programs that utilize the complementary courses can include the following courses. The Advanced Studies course allows for additional study through investigation and in-depth research.

COURSE TITLE:	**Forensic Science Advanced Studies**
ABBR. NAME:	**FORENSIC SCI AS**
CREDITS:	**1**
LEVEL:	**AS**
CIP CODE:	**43.0106**
PREREQUISITE:	**Forensic Science III**
CTSO:	**HOSA, SkillsUSA**

COURSE DESCRIPTION

Prerequisite: Forensic Science III

This course is offered to students who have achieved all content standards in a program whose desire is 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.

TECHNICAL STANDARDS

Students have achieved all program content standards and will pursue advanced study through investigation and in-depth research.

EMPLOYABILITY SKILLS FOR CAREER READINESS STANDARDS

Students have achieved all program content standards and will pursue advanced study through investigation and in-depth research.

SAMPLE TOPICS

- Clinical Lab Technician
- Forensic Technician
- Crime Science Investigator
- Evidence Technician

COMPLEMENTARY COURSE(S):
RECOMMENDED STUDENT PERFORMANCE STANDARDS

Programs that utilize the complementary courses can include the following courses. The lab courses allow additional time to be utilized in developing the processes, concepts, and principles as described in the classroom instruction. The standards and performance indicators for each lab course are shown in the corresponding course listed in the previous section.

COURSE TITLE:	**Forensic Science II LAB**
ABBR. NAME:	**FORENSIC SCI II L**
CREDITS:	**1**
LEVEL:	**L2L**
CIP CODE:	**43.0107**
PREREQUISITE:	**Concurrent enrollment in Forensic Science II**
CTSO:	**HOSA, SkillsUSA**

COURSE DESCRIPTION

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.

COURSE TITLE:	**Forensic Science III LAB**
ABBR. NAME:	**FORENSIC SCI III L**
CREDITS:	**1**
LEVEL:	**L3L**
CIP CODE:	**43.0107**
PREREQUISITE:	**Concurrent enrollment in Forensic Science III**
CTSO:	**HOSA, SkillsUSA**

COURSE DESCRIPTION

This course is designed to expand the students' opportunities for applied learning. This course provides an in-depth lab experience that applies the processes, concepts, and principles as described in the classroom instruction. The coursework will encourage students to explore and develop advanced skills in their program area. The appropriate use of technology and industry-standard equipment is an integral part of this course.