



CHELMSFORD HIGH SCHOOL

FORENSIC SCIENCE CP SYLLABUS 2023-2024

COURSE DESCRIPTION

Students will explore forensic skills by integrating criminal investigative techniques with hands-on experience in the scientific procedures now used in the modern crime laboratory. Students will learn evidence collection, chemical and physical analysis of the evidence and crime scene, and focus on how modern techniques affect investigations. Students will also focus on how to present results in investigative reports both written and oral.

Prerequisite: Successful completion of Biology

REQUIRED TEXTS

None

COURSE GOALS and STUDENT LEARNING OUTCOMES:

By the end of the course, students will be able to...

- Apply the scientific method to forensic investigations.
- Use appropriate forensic techniques to gather and examine evidence.
- Analyze forensic evidence to prove or disprove relationships and solve crimes.
- Use written and oral skills to convey information about forensic science topics using appropriate source materials.
- Apply the scientific method in developing science experiments.
- Communicate information gained in a forensic investigation both orally and in writing
- Evaluate the validity of different forensic techniques from a scientific and ethical viewpoint

COURSE STANDARDS

[DESE STANDARDS LINK](#)

PERSONS WITH DISABILITIES

Chelmsford High School is committed to supporting the success and well-being of all students, regardless of varying abilities and levels of adaptive skills. The Special Education office provides services and resources to empower each student to attain their highest level of academic success and learning independence.

ACADEMIC INTEGRITY

At Chelmsford High School, students are expected to maintain high moral and ethical standards, as exemplified by the final sentence of our mission statement: *"A spirit of respect is fostered, as members take*

responsibility for their actions and acknowledge the rights and differences of others.” (CHS Mission Statement)

Students should respect themselves, other students, staff members and the school. The acts of cheating and plagiarism violate expectations that students will exhibit respectful, ethical behavior.

[The Academic Honor Code](#) exists to address the issues of cheating and plagiarism.

GRADING POLICIES

Please connect with individual teachers for specific information regarding grading. Students will be able to monitor academic progress biweekly through X2/ASPEN.

Students are strongly encouraged to take advantage of the academic support programs and services (such as PRIDE Block, after-school help, etc.) available to them to help ensure and support success. Information about these services can be provided by your teacher, guidance counselor, or administration.

COURSE SKILLS

The following skills are addressed in this course:

- Asking questions (for science) and defining problems (for engineering)
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using math and computational thinking
- Constructing an explanation (for science) and designing a solution (for engineering)
- Engaging in an argument stemming from evidence
- Obtaining, evaluating, and communicating information

COURSE OUTLINE

Forensics is divided into 5 units:

Unit 1: Introduction to Forensics

- Deductive Reasoning and the Scientific Method Lab

Unit 2: Blood Analysis

- Blood Spatter Analysis Lab

Unit 3: Fingerprinting

- Patent Fingerprinting Lab
- Latent Fingerprinting Lab

Unit 4: Document Analysis

- Pen Ink Lab
- Paper Determination Lab
- Handwriting Analysis Lab

Unit 5: Trace Analysis

- Fiber Analysis Lab
- Drug Chromatography Lab

Final Project: Create a crime scene with evidence

This syllabus and course outline are subject to change as Chelmsford High School seeks to continually improve the learning experiences for all students.

“We foster PRIDE* in our pursuit of excellence.”

PRIDE refers to our five core values – Perseverance, Respect, Integrity, Dedication, and Empathy. These five pillars represent our points of emphasis in supporting the development of quality students and quality citizens.