

Plymouth Public Schools' Science and Technology/Engineering Program

College Prep 1 Forensics Course Syllabus

STE2073 Forensics College Prep 1

Semester course intended for students in grades 9 through 12 worth 2.5 credits

Course Description

This laboratory course focuses on the analysis of physical evidence found at crime scenes. In addition to case studies, topics include blood, drugs and toxicology, types of evidence, and the analysis of DNA, hair, fibers, soil, and trace evidence. The fundamental objective is to learn the basic processes and principles of scientific thinking and apply them to solve problems through inquiry using critical thinking skills. The multidisciplinary nature of this course includes chemistry, anatomy and physiology, genetics, and physics, as well as math, law and communications. The course also includes independent research, student presentations, lab work, and informed decision-making using critical thinking and scientific problem solving. The prerequisite includes departmental recommendation.

Instructional Objectives

Students will independently and collaboratively:

1. Engage in scientific inquiry and engineering design through the use of science and engineering practices.
2. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to answer a question or solve a problem.
3. Draw evidence from literary or informational texts to support analysis, reflection, and research.
4. Produce clear and coherent writing in which the development, organization and style are appropriate to task, purpose and audience.
5. Demonstrate proficiency in forensics-related phenomena associated with the structures and processes of living things from molecules to organisms, the inheritance and variation of traits in heredity, matter and its interactions, and the motion and stability of forces and their interactions.

Themes and Topics

1. Crime Investigation – the study of crime and crime scenes; systematic methods of obtaining data and application of scientific processes to understand details of a crime; importance of inquiry process (e.g., sketching, personnel, measurement, photography)
2. Evidence – special training and equipment needed to locate and identify different types of evidence (e.g., hair and fibers, DNA, fingerprints, blood, footwear, tire marks, toxicology)
3. Specific Crimes – peculiarities that challenge forensic investigators (e.g., personal injuries, drug crimes, gun crimes, computer crimes and digital evidence, arson, robbery and theft, fraud and forgery, handwriting analysis, document analysis)

Text and Instructional Materials

Bertino, Anthony J, and Patricia N. Bertino. *Forensic Science: Fundamentals & Investigations*. Mason, OH: South-Western Cengage Learning, 2009.

Cheating/Plagiarism

The excerpt from the Plymouth Public Schools' Student Handbook on plagiarism and copyright infringement states, "Existing copyright law will govern the use of material accessed through network. The user will not plagiarize works found on the Internet. Plagiarism is taking the ideas or writings of others and presenting them as if they were yours. All copyrighted material used must have the express written permission of the person or organization that owns the copyright. Any student who has cheated on any academic exercise will receive no credit for that exercise. Plagiarism is a form of cheating. A parent/guardian will be notified by the involved teacher in all instances of cheating. The investigation of the claim of cheating and plagiarism will involve the student, teacher, and administration."

Grading Policy and Assessment

Levels of proficiency on various tasks and assignments determine student grades. During each grading term, students' grades will be based upon the following:

- 30% Class Work and Homework
- 70% Assessments

The final course average (semester) will be calculated as follows:

- 45% Term Grade (first of the semester)
- 45% Term Grade (second of the semester)
- 10% Final Exam