 

**Forensic Science**

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The Eisenhower High School **Forensic Science** course is a two semester, 1 hr credit course open to all students who have successfully completed biology and geometry. The course completes the Application tier of the required courses for the Law Enforcement, Public Safety, Corrections and Security career track.

Forensics is a field of science dedicated to the methodical gathering and analysis of evidence to establish facts that can be presented in a legal proceeding. Though crime scenes and laboratories are perhaps, most often associated with forensics, there is also computer or network forensics, forensic accounting, forensic engineering and forensic psychiatry, among other specialized fields that are today an integral part of forensics.

Forensic science is the practical application of science to matters of the law. In criminal law, forensics science can help prove the guilt or innocence of the defendant. In civil actions, forensics can help resolve a broad spectrum of legal issues through the identification, analysis and evaluation of physical evidence.

Forensic science draws upon a variety of scientific principles, including biology, physics and chemistry. The field of forensic science covers: Document examination; DNA analysis; Electronic/digital media; Fingerprinting; Autopsy techniques; Forensic engineering; Linguistics; Forensic anthropology; Pathology; Economics; Accounting; Biology; Entomology; Toxicology and much more.

**Philosophy**:  This course is designed to be an overview course in Forensic Science for high school students.

**Expectations**:  Students are expected to come to class prepared to learn, with all assignments completed, and ready to participate in class.  Students are expected to spend time in classroom and at home reading, studying, and completing training labs, application labs and homework assignments.

**Course Description**:  This course is designed to give students an over view of Forensic science and to see how crime scenes are investigated.  The laboratory portion of the course is designed to give students a hands-on experience to reinforce lecture material.

**Course Objectives:**

1. Students will gain valuable and accurate information about biology, biomed, and forensic science concepts and issues.
2. Students will develop scientific reasoning and process skills.
3. Students will work in teams and independently and be able to evaluate his/her progress.
4. To help prepare students for the demands of higher education.

**COURSE CONTENT/TOPIC HEADINGS:**

1. **Semester One (Fall)**
* Scientific Method, Lab Safety, Manipulating Variables, Lab Reports and Write Ups
* Introduction practice HazMat & Bloodborne Pathogene and simulation lab on collecting HazMat materials
* The Crime Scene: photography, drawing, application of methodology, observation skills, and physical evidence
* Eye Witness accounts and criminal composite face sketches
* Tools used in science e.g. microscopes, scientific method, measuring, digital scales, colorimeter, electrophoresis device
* Osmosis and Diffusion, Serial Dilution, Chromatography
* Drugs and Toxicology
* Serology
* DNA Analysis --lecture with ppt and training lab , electrophoresis (DNA fingerprinting)
* Proficiency Quizzes
* Semester Exam
1. **Semester Two (Winter-Spring)**
* Handwriting/Document Analysis
* Computer Crime tracing, Counterfeiting, and Identity
* Paper and Ink Analysis
* Trace Evidence
* Soil and Glass Analysis
* Ballistics and Tool Marks
* Serology blood splatter and patterns related to crime scene
* Forensic Entomology
* Forensic anthropology and Human Remains
* Proficiency Quizzes
* Semester Exam

**Outcomes: Students will…**

1. develop proper laboratory skills.
2. develop writing skills to show comprehension of learned materials.
3. develop critical thinking processes and make value judgments.

**Classroom Expectations:**

This is a science class that will help you graduate from high school and we will have a lot of material to cover. In order to cover it all effectively we need to have a classroom that is respectful, responsible, ready and responsive.

**Be Respectful:** listen quietly when I am speaking and respect one others space, materials and feelings. Raise your hand when you want to contribute to class. At the end of the hour, stay seated in your assigned seat until I dismiss you.

**Be Responsible.** You will need to be responsible for yourself and your materials. This includes text book, class notebook, class journal, home work, blank paper to write on, and writing utensils. Passes are for emergencies and learning opportunities only. Make restroom and lock stops before you come to my class.

**Be Ready:** arrive to class on time, be seated in assigned space when the bell rings and come to class with an open and mind ready to learn. Check Blackboard weekly for announcements, new assignments and other important information.

**Be Responsive:** actively participate in class room discussions in a positive manner with comments relative to the subject at hand. If your behavior interferes with the normal classroom activities or with the learning of other students in the class, appropriate action will be taken.

**Rewards for meeting classroom expectations:**

1. Positive feedback from teacher and peers.
2. Positive notes, emails, calls home to parents for a job well done.
3. Expanded privileges or responsibilities related to the class.
4. Mutual respect.

Since this class helps to prepare you for “real world expectations,” rewards such as an “Opps” coupon or pass to miss a test will not be given. Learning at school is the job you do from 7:40 a.m. to 2:54 p.m. Monday-Friday and a job requires accountability and responsibility.

**Consequences**

1. Verbal Warning
2. Discussion during class
3. Call home to parents
4. Conference with vice-principal to try to solve the problem

**Class behavior/discipline**

Since the objectives at school and in class is to have implementation of fair, consistent classroom and total school expectations for students, the Class Discipline Procedures and Student Behavior code as outlined in your student agenda will be used for this class. It will be your responsibility to review these items listed in your agenda.

Additionally “horseplay” or inappropriate lab activity or actions will not be tolerated and will result in appropriate disciplinary action.

**What NOT to bring to class**

* No food in class—we are a science class and lab which requires proper protocol.
* No personal grooming in class.
* No beverages—only water bottles.

**What to Bring to Class Daily**

* Paper
* Writing instrument—pen or pencil
* Colored pencils and highlighters
* Three ring notebook or portfolio to hold your homework, notes, and assignments
* For outdoor labs—appropriate attire for the weather outside (no flip flops or sandals).
* Electronic devices such as iPads, Smartphones, Blackberries, Kindles, etc (BYOD) may be brought to class to be used for educational purposes only. Misuse (texting, etc in class) will result in the device being taken away with a meeting with their administrator.

**Grading Policy:**

Grading will be based on a points system. Each assignment, activity, lab, quiz and test will be given a point value. Your final score will be determined by how many points you have earned out of the points possible. Parents will have access to your grades via “Skyward.”

Homework: 20% of grade

Training Labs: 30% of grade

Application Labs (Assessment): 50% of grade

**Evaluation:**

The number of points you earn in class determines your grade. The total number of points you earn divided by the total possible points will give you your percentage grade in class.

Each student is expected to take a comprehensive final exam at the end of the semester. The Application labs/tests will be at a value of 50% of your overall grade ; Training labs 30%, 20% for home work,

**Assignments:**

1. Assignments are due as per my instructions
2. You name, date, and hour are required in the upper right hand corner of any paperwork turned in.
3. Assignments should have a title.
4. You are responsible for contacting me for any make-up work for being absent.
5. Homework will be assigned on a regular basis and listed on Blackboard and in class. Most due dates are provided up to four weeks in advance of date due.
6. With every assignment that is done, always make sure you do the best quality of work that you are capable of doing.

**Testing:**

Tests may be made up before or after class, at night library, or during my planning period. Students who will be absent for an approved school activity or planned family need (medical appointment, etc) are to check about make-up work before the event.

**Make-up Work:**

This class has a great many in-class training labs and application labs. You are responsible for completing all of this work and, if absent, it will require you to come in before or after school to complete the labs.

Regardless of why you missed a class, you will need to make up the work. You are expected to use the make-up notebook to check your assignments, bellwork, etc. when you return to class.

You are the one who is responsible for obtaining, completing within the time provided, and returning the missing assignments. Determination for the point value for make-up credit is left to

the discretion of the teacher.

**Excused Absences:**

Students who are absent will have one day for each day absent to make-up missed work. I would highly suggest you see me outside of class to discuss what you missed. You also need to consult Blackboard (ecology site). During class is usually not a good time to talk about your missed work as we have things to accomplish during that class period.

**Unexcused Absences:**

Any missed work or tests because of an unexcused absence will be considered a zero grade with no chance of making up the work.

**Late Work:**

It is an expectation that you will have your work completed on time. Should an exception be made and announced in class then the following guide will be used:

One day late: minus 20% of total points

Two days late: minus 40% of total points

Three days late: minus 60% of total points

Four days late: minus 80% of total points

Five days late: not accepted

**Assignments:**

My expectations are high for what you need to be accomplishing since Forensic Science is an science class for students who have taken two years of science already and, for some, wish to complete the Law Enforcement career track requirements. Many of you are going onto college and this class is designed to help prepare you for a college style science class. You will need to take good notes during class lectures and labs, read your textbook chapters, ask questions, routinely check Blackboard for out-of-class work, study and produce excellent work.

1. All assignments will be posted on the class’s whiteboard and Blackboard (Bb) under the topic heading “Assignments”. It will be your responsibility to check Blackboard routinely, at least once a week. If you do not have Internet access, please inform me immediately and a hard copy of the assignment and procedures will be provided.
2. Grading Rubrics and procedures will be available on Blackboard and posted in class.
3. Computer and Internet Labs. You will be working on the Internet. You have been provided with several external links on Blackboard from which to complete worksheets and class assignments. If you do have access to a computer or Internet—the school library is available from 3-4pm Monday and Tuesday or at night library 6-8 p.m. Wednesday and Thursday.
4. Blackboard (Bb) –to access go to [www.goddardusd.com](http://www.goddardusd.com), click on Schools, click on EHS then click on the Blackboard icon (Bb) on the page. Once on the Blackboard home page click on Forensic Science and then enter your user name and password.The guest account is username: ehsguest1 password: password (do not change this). Or you use your own student sign-on--type in your first initial and last name followed by the numbers 265 (example: dscribner265). The password is: password until you change it after your first sign on.
5. Projects (an assignment sheet outlining details will be provided).

 7. Daily and Weekly assignments and in-class labs as assigned.