|  |  |
| --- | --- |
|  | *Fairfield Ludlowe High School - Fairfield Warde High School* **CRIME LAB FORENSICS**  |
| K. Smigala | Room 349 |
| Spring 2015 |   |
| ksmigala@fairfieldschools.org  |
| COURSE DESCRIPTION |
|  Crime Lab Forensics, which is a laboratory-based course, will promote and cultivate the development of student’s scientific inquiry and scientific method skills, which are important critical thinking skills. Crime Lab Forensics applies concepts and skills acquired in grades nine and ten to look at the criminal justice area. This course focuses on problem solving, with an emphasis on writing, using experimentation and evidence based conclusions. Students will write reports that record their results, conclusions and analyses of case studies and investigations. Students will participate in hands-on laboratory exercises that require lengthy laboratory procedures with many recently developed techniques for DNA extraction, DNA fingerprinting by gel electrophoresis, molecular DNA probes, protein analysis, PCR, sequencing, bioinformatics, drug and toxicology testing, handwriting and document analysis, arson investigation and ethics. The course is laboratory driven and requires students to use advanced tools and equipment in addition to excellent observation skills. |
| COURSE OBJECTIVES |
| Students will understand that:* the genetic composition of cells can be altered by incorporation of exogenous DNA into the cells.
* microorganisms have an essential role in life processes and cycles on Earth.
* stability in an ecosystem is a balance between competing effects.
* chemical technologies present both risks and benefits to the health and well-being of humans, plants and animals.
* as a result of the coordinated structures and functions of organ systems, the internal environment of the human body remains relatively stable (homeostatic) despite changes in the outside environment.
* the periodic table displays the elements in increasing atomic number and shows how periodicity of the physical and chemical properties of the elements relates to atomic structure.
* scientific inquiry progresses through a continuous process of questioning, data collection, analysis and interpretation.
 |
| UNITS OF STUDY |
| * DNA Evidence
* Forensic Pathology
* Toxicology
* Arson and Explosives Investigation
* Handwriting and Document Analysis
 |
| COURSE POLICIES AND REQUIREMENTS |
|  GRADING |
|  | Summative Assessments: |  80%Tests, Quizzes, Projects, Most Labs |
|  | Formative Assessments: | 20%Homework, classwork, some labs |
|  | Behavioral Characteristics: | 0%  |
|  |  Late work including homework and lab reports will no longer be accepted once other student's papers have been returned to them. Projects will be given a final due date. They will not be accepted after this date. |
|  MATERIALS |
|  | Forensics Science for High School by Barbara Deslich and John Funkhouser3 ring binder is strongly recommended |
|  EXPECTATIONS OF STUDENTS |
|  | When you are absent, YOU are responsible for getting copies of all missed handouts, homework assignments, and notes. You are also responsible for making up any missed lab activities in a timely manner- usually within a week or less. If you are absent for 1 day and a test or quiz was given on that day, be prepared to take your exam the day you return during the class period. |
|  EXTRA HELP |
|  | Ms. Smigala is available before, during and after school. Schedule an appointment to get help with missed work or for extra help. |
| Anticipated Field Trips/Guest Speakers:Trip to the Fairfield Police DepartmentGuest presentation from a K9 officerGuest Lecture from a CT State Trooper about DUI |