

METROPOLITAN STATE COLLEGE *of* DENVER
Office of Academic Affairs

REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Chemistry

CIP Code: 40.0502

Prefix & Course Number: CHE 2710

Crosslisted With*: N/A

Course Title: Introduction to Criminalistics

Check All That Apply: Required for Major: _____ Required for Minor: X (crim) Specified Elective: _____

Required for Concentration: X (crim) Elective: _____ Service Course: _____

Credit Hours: 3 (3 + 0)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 45 Lab _____ Internship _____ Practicum _____ Other (please specify type and hours): _____

Schedule Type(s): L Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned**):

** NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): None

Prerequisite(s): CHE 1100 or CHE 1800

Corequisite(s): None

Prerequisite(s) or Corequisite(s): N/A

Banner Enforced:

Prerequisite(s): X

Corequisite(s):

Prerequisite(s) or Corequisite(s):

Catalog Course Description:

This course introduces the student to the application of science at crime scenes and the crime laboratory. It provides a survey of forensic science including pathology, entomology, anthropology, microevidence, drug analysis, toxicology, dactyloscopy, firearms examination, serology, hair and fiber analysis, soil and glass analysis, and crime scene processing.

APPROVED:

Department Chair OR Program Director

1/29/07

Date

Dean OR Associate Dean

1/31/07

Date

Associate VP, Academic Affairs

2/20/07

Date

*If crosslisted, attach completed Course Crosslisting Agreement Form

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Required Reading and Other Materials will be equivalent to:

Criminalistics: An Introduction to Forensic Science, Saferstein, Prentice-Hall Publishing, 8th Edition, 2004.

Specific, Measurable Student Behavioral Learning Objectives:

Upon completion of this course the student should be able to:

1. properly collect and handle each type of evidence covered in the course.
2. demonstrate understanding of the roles of the Criminalistics laboratory and Criminalistics in the criminal justice system.
3. demonstrate understanding of the general principles of operation of different types of microscopes and the major types of instrumentation in the Criminalistics laboratory.
4. explain the general principles of analysis of each type of evidence discussed.
5. demonstrate understanding of the principles of classification and individualization.
6. demonstrate understanding of the principles involved in becoming an effective witness in the courtroom.
7. demonstrate understanding of the role of anthropologists, entomologists and pathologists.

Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision):

- I. Introduction to Criminalistics
 - A. science applied to law
 - B. role of the crime laboratory in the criminal justice system
 - C. types of analysis performed in crime laboratory
- II. Evidence
 - A. real, direct and circumstantial
 - B. admissibility in court
 - C. importance of evidence in prosecuting a case
- III. Firearms Identification
 - A. basic principles
 - B. standard techniques used by examiners
- IV. Trace Evidence
 - A. paint, soil, glass, gunshot residue analysis
 - B. techniques for analyzing arson debris, hairs and fibers
- V. Questioned Documents
 - A. basic principles of handwriting analysis
 - B. analytical techniques for ink analysis
- VI. Crime Scene Investigation
 - A. recording a crime scene
 - B. evidence collection and preservation
 - C. chain of custody
- VII. Fingerprinting
 - A. basic principles
 - B. standard techniques used
- VIII. Drug Analysis
 - A. instrumental analysis
 - B. nature of controlled substances
 - C. analytical procedures
- IX. Biological Evidence
 - A. Presumptive tests for body fluids
 - B. Introduction to DNA analysis
- X. Polygraph
 - A. principles behind the polygraph test
 - B. usefulness as investigative tool
- XI. Forensic Pathology overview
- XII. Forensic Odontology overview
- XIII. Forensic Anthropology overview
- XIV. Forensic Entomology overview

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Evaluation of Student Performance

The final grade determination will be based on students' performance on:

1. periodic fifty minute examinations,
2. short quizzes,
3. a final exam one hundred minutes long, and
4. classroom participation.