Professional Practice in Forensic Science  
(BIMS 3325.001)  
Department of Life Sciences  
Spring 2020

A. COURSE INFORMATION

Course number/section: BIMS 3325.001  
Class meeting time: TR 5:30pm-6:45pm  
Class location: ECMS 210  
Course Website: Blackboard

B. INSTRUCTOR INFORMATION

Instructor: Edelmiro Garcia, M. Ed.  
Office location: N/A  
Office hours: Appointments made via email  
Telephone: 361-813-3761  
e-mail: edelmiro.garcia@tamucc.edu  
Appointments: Appointments made via email

C. COURSE DESCRIPTION

Catalog Course Description
An introduction to industry standards and ethics for professional forensic scientists. This course analyzes cognitive processes, scientific methods and quality control/quality assurance issues in forensic investigations. It also stresses maintaining credibility in an adversarial legal system through the development of technical/scientific speaking and writing skills.

Extended Course Description
This is an introductory course in the basic and advanced scientific methods used in forensic investigations. The focus of this course will be placed on the methodologies, cognitive processes, deductive reasoning and the scientific processes of hypothesis development, analysis of data, and the use of scientific materials in gathering and processing evidence found at crime scenes. This course will cover an introduction to the legal and medicolegal systems, ethics and the professional practice of forensic investigations. Students will investigate the process of evidence identification, collection and preservation processes. Students will discuss and be exposed to the legal issues surrounding quality assurance and the process of obtaining sufficiency of sample. An ongoing introduction to courtroom testimony is included in the course and the student will be challenged to support issues and practices in a mock adversarial process. Students will be made aware of the need for technical and/or scientific writing practices to maintain compliance with industry standards and credibility.
D. PREREQUISITES AND COREQUISITES

Prerequisites

BIMS 3320: Survey of Forensic Science

Corequisites

None

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)

   ISBN: 0-8493-2747-4

Optional Textbook(s) or Other References


F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

Throughout the length of this course:

1. Students will learn through group project(s) utilizing the cognitive and affective skills learned in the classroom.
2. Informal assessments through in-class exercises.
3. Laboratory experiments if provided utilizing Forensic Science in the laboratory, Application of the Social Sciences, Legal and Ethical Issues in Forensic Science
4. Field exercises, directed study and self-study.
5. Writing assignments utilizing text formatted terminology, appropriate for testimonial presentation.
G. INSTRUCTIONAL METHODS AND ACTIVITIES

- **Lecture:** Instructor/student in a lecture format will present Text material.
- **Audio/Visual:** Video material and PowerPoint presentations make up a portion of the presentations.
- **Written:** Students will write a research paper of a minimum of 10 pages, the paper will be written in Arial or Times New Roman, 12 pt. font, double spaced, APA format; a written report will be made of the decomp project for the final exam.
- **Group Work:** Students will be broken up into teams to complete class projects and decomp project.
- **Reteaching/Check for Understanding:** Each class segment will culminate in a review of the course objectives for that particular class.

H. MAJOR COURSE DELIVERABLES AND GRADING

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Paper</td>
<td>30%</td>
</tr>
<tr>
<td>(6) NIJ Certificates</td>
<td>20%</td>
</tr>
<tr>
<td>Participation</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
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</tbody>
</table>

**Student Deliverables:**

**Research Paper:** (30%) The student will prepare a PowerPoint presentation on a specific topic related to their field of study and the application of forensic science to that field. Students will write a research paper of a minimum of 10 pages and no more than 12 pages, the paper will be written in Arial or Times New Roman, 12 pt. font, double spaced, APA format. Topics subject to review and approval by the instructor.

**National Institute of Justice:** (20%) The student will complete four (6) training courses in the NIJ website and will present all four certificates to instructor by deadline (date assigned by professor during class) each certificate is 3.33% of the total 20%. Any certificate not completed 3.33% will be deducted from total percentage stated above.

**Participation:** (20%) Student will participate in group work and will be assessed by team recommendations and instructor. Student(s) will demonstrate dependability, attendance, and demonstrate a cohesive team effort to complete all tasks assigned by instructor and team leader. Participation is of the up most importance. Please see table on section J for further clarification on absences and non-participation.

**Final Exam Project:** (30%) The final exam is an application level review of the student’s abilities in utilizing the concepts learned throughout the semester. Students will work in teams to create an environment wherein they will challenge each other to incorporate the scientific methods learned during the semester. Student(s)/team will prepare a
A comprehensive report/paper which will detail all the steps performed to document and evaluate the decomp project and present in a power point presentation or any media that can be shown in class to peers. All presentations must be sent one week before scheduled presentation of the team.

**Grading/Evaluation Procedures**

**Assessment:** Insofar that a great deal of emphasis will be placed on the student to perform up to industry standards, it is necessary that the student provide only the best in written assignments. Points will be deducted for poor grammar, spelling errors, poor sentence structure, common format errors, incorrect format and lack of clarity.

Group work will be assessed based on recommendations by team members as to who performed in concert to complete the task at hand. Team members who fail to support the team will be graded accordingly.

You are not allowed to have any spelling, grammar, punctuation, sentence structure, or format errors in your written documents. All written materials are to be taken to the writing center for review and correction prior to submission for your grade. If there are more than three errors in any written document, your paper will be returned with a grade of “incomplete” assigned to the paper and your course grade. No late papers will be allowed barring natural disaster or tragic family occurrence. This is not negotiable. APA format is the industry standard and will be applied to all written documents.

### I. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>DATE (BY DAY OR WEEK)</th>
<th>TOPIC</th>
<th>CHAPTER(S)</th>
<th>ASSIGNMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Introduction, sylla</td>
<td>1-4</td>
<td>Chapter reading, Prep for presentations</td>
</tr>
<tr>
<td></td>
<td>bus, assignments for chapter presentations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 2-5</td>
<td>Group Work</td>
<td>5-8</td>
<td>Presentations</td>
</tr>
<tr>
<td>Week 6-7,8</td>
<td>Holiday – No classes</td>
<td>Spring Break</td>
<td>No Assignment</td>
</tr>
<tr>
<td>Week 9-10</td>
<td>Forensic Science Certifications</td>
<td>NIJ Website/9-12</td>
<td>6 NiJ Certifications</td>
</tr>
<tr>
<td>Week 11-12</td>
<td>Project</td>
<td>13-16</td>
<td>Group Work</td>
</tr>
<tr>
<td>Week 13-14</td>
<td>Project</td>
<td>17-20,21</td>
<td>Group Work</td>
</tr>
<tr>
<td>&quot;</td>
<td>Project Presentations</td>
<td></td>
<td>Group Work</td>
</tr>
<tr>
<td>&quot;</td>
<td>Decomp Project</td>
<td>Documentation</td>
<td>Presentations</td>
</tr>
<tr>
<td>May 7-10</td>
<td>Final Exam</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

Course Outline:

Section 1: Setting the Stage
Chapter 1 Justice and Science
Chapter 2 Evidence: Origins, Types, and Admissibility, Summary

Section 2: The Crime Scene
Chapter 3 Crime Scene Investigation
Chapter 4 Bloodstain Patterns, Summary

Section 3 Forensic Death Investigation
Chapter 5 Death Investigation
Chapter 6 Forensic Anthropology
Chapter 7 Forensic Entomology, Summary

Section 4: Forensic Biology
Chapter 8 Identification of Blood and Body Fluids
Chapter 9 DNA Typing, Summary

Section 5: Forensic Chemistry
Chapter 10 Forensic Toxicology
Chapter 11 Seized Drug Analysis
Chapter 12 Arson, Fire, and Explosives, Summary

Section 6: Pattern and Impression Evidence
Chapter 13 Fingerprints
Chapter 14 Firearms and Tool Marks
Chapter 15 Tread Impressions, Summary

Section 7: Cross-Cutting Forensic Disciplines
Chapter 16 Trace Evidence
Chapter 17 Questioned Documents, Summary

Section 8: Engineering and Computing
Chapter 18 Forensic Engineering
Chapter 19 Forensic Computing, Summary

Section 9: The Human Element and the Future of Forensic Science

Chapter 20 Behavioral Science and Forensic Science

Chapter 21 The Future of Forensic Science, Summary

J. COURSE POLICIES

Attendance/Tardiness

Absences: In addition to following TAMU-CC policy on absences, I recognize that things happen in our lives that interfere with our ability to complete our education. I will do all in my power to accommodate any student who has shown an honest effort, to complete this course, but who, for reasons beyond their control, find themselves in a position that requires them to prioritize their lives around their family, to complete this course, in another fashion, if possible. However, recurring absences will certainly lead to penalties.

<table>
<thead>
<tr>
<th>Occurrence #</th>
<th>Penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Warning</td>
</tr>
<tr>
<td>2</td>
<td>Lose 10 points (half a letter grade)</td>
</tr>
<tr>
<td>3</td>
<td>Lose 10 additional points (making a full letter grade)</td>
</tr>
<tr>
<td>4</td>
<td>Probation Status</td>
</tr>
<tr>
<td>5</td>
<td>Dropped from the course</td>
</tr>
</tbody>
</table>

Tardiness: Students who are consistently late interfere with my ability to lecture, miss important information and disrespect their fellow classmates. After the third tardy, I will have a discussion with the student. If there is a valid reason for the tardiness, we will work something out. If there is not a valid reason for the tardiness, the student will be asked to drop the class until they can mature to the level of responsibility to meet their commitments.

Late Work and Make-up Exams

This industry does not accept late work, nor does it give “extra credit”. Neither do I.

Extra Credit: No Extra Credit will be given.

Cell Phone Use: No cell phones during Tuesday night’s class, phones should be silenced.

Laptop Use: Students may use computer for assigned class work.

Food in Class: Snacks or drink will be allowed at Tuesday night’s class, not during lab days except for drink.
Missed Exam: Exams will be part of your lab exercises; labs will not be repeated. Presentations can be rescheduled only if instructor is notified 2 weeks in advance.

Others: All assignments will be due at due date set by instructor. Instructor reserves the right to modify deadlines to accommodate any changes to syllabus or cancelations of class.

K. COLLEGE AND UNIVERSITY POLICIES

• Academic Integrity (University)
  University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

• Classroom/Professional Behavior
  Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

• Statement of Civility
  Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

• Deadline for Dropping a Course with a Grade of W (University)
  I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. Please consult with your academic advisor, the Financial Aid Office, and me, before you decide to
drop this course. Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day to drop a course.

- **Grade Appeals (College of Science and Engineering)**
  As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage at http://sci.tamucc.edu/students/GradeAppeal.html. For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

- **Disability Services**
  The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.

  If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816. http://disabilityservices.tamucc.edu/

- **Statement of Academic Continuity**
  In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be
operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

L. OTHER INFORMATION

- Academic Advising
  The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

- Caveat
  The field of forensic science is foremost a general study of how nature interacts with humanity. In particular, how nature interacts with the unlawful acts perpetrated on man and nature. To this end, the evidentiary importance of providing accurate, credible and scientifically collected and preserved items that portray or lead a reasonable and prudent person to believe that a crime is being, has been or is about to be committed is of paramount importance. In this area, there is no room for error. It is either 100% correct or it is 100% wrong.

  My goal is to give you the basic tools that will allow you to apply the knowledge and skills you have acquired from life and your formal education, to seek the truth and uncover the often-hidden attributes of the beginning of life, death and the time and sequence of events between these two most important points in our existence. Insofar that life is a mystery, your goal is to make sense of those mysterious events in our lives and to use these skills for the betterment of mankind. 100% of the time wherein you apply these skills.

  This syllabus is subject to change depending on the needs of the students and the dynamics of the learning experience.

GENERAL DISCLAIMER

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.