CMJ 105 - INTRODUCTION TO FORENSIC SCIENCE
Fall Syllabus 2016

INSTRUCTOR INFORMATION

Associate Professor David Striegel
Guerrieri Hall, Room 202-D
Office Phone: 410-572-8755
Office Hours:

Monday  4:00 – 4:30 p.m.
Tuesday 10:45 – 11:15 a.m.
       5:00 p.m. – 6:30 p.m.
Wednesday 4:00 – 4:30 p.m.
Thursday 10:45 – 11:15 a.m.
       5:00 p.m. – 6:30 p.m.
Friday   By appointment

Email Address: dstriegel@worwic.edu

TEXTBOOK


COURSE DESCRIPTION

An introduction to the scientific discipline directed at the recognition, identification, and evaluation of physical evidence through application of the natural sciences to criminal investigation. Emphasis is placed on the role of the forensic scientist. This course includes lab study designed to reinforce important forensic skills.
COURSE OBJECTIVES, ASSESSMENT GOALS, AND ASSESSMENT STRATEGIES

Upon successful completion of this course the student will demonstrate the ability to:

1. Examine the role of forensic science and the services provided by forensic laboratories. (GEO 7,9)
   A. Differentiate between forensic science and criminalistics.
   B. Explain the significance of forensic evidence to a criminal investigation.
   C. Identify important developments in the history of forensic science.
   D. Explain the role of the scientific method in forensic science.
   E. Explain the role and capabilities of the forensic science laboratory.
   F. Identify forensic services provided by the Maryland State Police Crime Lab.
   G. Identify professional standards and ethics that guide the field of forensic investigation.
   H. Differentiate between the specialized areas of forensic science.
   I. Define key terms relevant to forensic science.

   Assessment Strategies: Unit exam, final exam, discussion, research project.

2. Identify the fundamentals of crime scene processing. (GEO 4,5)
   A. Differentiate between crime scene processing and crime scene analysis.
   B. Identify responsibilities of the first responding officer at a crime scene.
   C. Identify the steps to secure and document a crime scene.
   D. Describe the procedures for conducting a crime scene search for physical evidence.
   E. Identify basic procedures for collection and packaging common types of evidence.
   F. Define key terms relevant to crime scene processing.

   Assessment Strategies: Unit exam, final exam, discussion, lab exercise.

3. Examine legal issues within forensic science and procedures for testifying as an expert witness in court. (GEO 2,9)
   A. Identify legal standards that govern admissibility of forensic evidence.
   B. Distinguish between the Frye rule and Daubert standard of admissibility.
   C. Differentiate between a lay witness and expert witness.
   D. Identify guidelines for providing expert testimony in court.
   E. Define key terms relevant to courtroom testimony.

   Assessment Strategies: Unit exam, final exam, discussion.
4. Examine the nature and characteristics of physical evidence. (GEO 4,5)
   A. Explain the Locard Exchange Principle and its importance to forensics.
   B. Describe how physical evidence originates or is produced.
   C. Identify and characterize various types of physical evidence.
   D. Compare and contrast individual and class characteristics.
   E. Identify the types of controls and comparison standards for each type of physical evidence.
   F. Differentiate between the AFIS, CODIS, and NIBIN databases.
   G. Identify the evidentiary value of specific types of physical evidence.
   H. Define key terms relevant to physical evidence.

   Assessment Strategies: Unit exam, final exam, discussion, lab exercise.

5. Identify the principles of the examination of physical pattern evidence. (GEO 4,5)
   A. Identify the ten major types of pattern evidence.
   B. Differentiate between reconstruction and individualization patterns.
   C. Identify general principles in physical pattern comparisons.
   D. Identify the three categories of individualization pattern evidence -- physical matches, impression marks, and shape and form.
   E. Differentiate between impression and striation mark comparisons.
   F. Identify and characterize other personal identification patterns, including fingerprints, questioned documents, tool marks and firearms.

   Assessment Strategies: Unit exam, final exam, discussion, lab exercise.

6. Identify the basic principles of forensic examination and analysis of biological, chemical, and materials evidence. (GEO 4,5)
   A. Identify and describe the different types of biological, chemical, and materials evidence.
   B. Explain how biological, chemical and materials evidence is collected and analyzed.
   C. Compare evidence against standard/reference samples.
   D. Define key terms relevant to different types of physical evidence.

   Assessment Strategies: Unit exam, final exam, discussion, lab exercise.
7. Demonstrate laboratory skills to examine common types of physical evidence. (GEO 1,4,5,6,7)

A. Identify techniques and instrumentation used in the laboratory to analyze various types of evidence.
B. Explain the basic principles of microscopy.
C. Demonstrate the use of a compound microscope, stereomicroscope, and comparison microscope.
D. Examine physical evidence during lab sessions.

Assessment Strategies: Unit exam, final exam, discussion, lab exercises.

COURSE CONTENT

Introduction to Forensic Science – Chapter 1
Physical Evidence and the Legal System – Chapter 2
Crime Scene Processing and Analysis – Chapter 3
Examination and Interpretation of Patterns for Reconstruction – Chapter 4
Examination of Physical Pattern Evidence – Chapter 5
Fingerprints and Other Personal Identification Patterns – Chapter 6
Questioned Document Examination – Chapter 7
Toolmarks and Firearms – Chapter 8
Blood and Physiological Fluid Evidence: Evaluation and Initial Examination – Chapter 9
DNA Analysis and Typing – Chapter 10
Arson and Explosives – Chapter 11
Drugs, Drug Analysis and Forensic Toxicology – Chapter 12
Materials Evidence – Chapter 13

TENTATIVE SCHEDULE

Week #1 Course orientation, Chapter 1
Week #2 Chapter 1, 2
   Introduction to Microscopy
Week #3 Lab #1 Microscopy
   Chapter 3, 4
Week #4 Chapter 4, 5
Week #5 Exam #1 (chapters 1, 2, 3, 4, 5)
   Chapter 6
<table>
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<tr>
<th>Week #6</th>
<th>Chapters 6, 7</th>
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<tbody>
<tr>
<td></td>
<td>Lab #2 Bloodstain Analysis</td>
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<tr>
<td>Week #7</td>
<td>Chapters 7, 8</td>
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<tr>
<td></td>
<td>Lab #3 Fingerprint Classification</td>
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<tr>
<td>Week #8</td>
<td>Chapter 8</td>
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<td>Lab #4 Latent Print Recovery - Powder</td>
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<td>Week #9</td>
<td>Chapters 9, 10</td>
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<td></td>
<td>Lab #5 Latent Print Recovery – Chemicals</td>
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<tr>
<td>Week #10</td>
<td>Exam #2</td>
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<tr>
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<td>Chapter 11</td>
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<td>Week #11</td>
<td>Chapter 11, 12</td>
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<td></td>
<td>Lab #6 Firearms Examination</td>
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<td>Week #12</td>
<td>Chapter 12, 13</td>
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<td></td>
<td>Lab #7 Tool Mark Examination</td>
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<tr>
<td>Week #13</td>
<td>Lab #8 (type of lab to be decided)</td>
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<td></td>
<td>Final exam review</td>
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<td>Week #14</td>
<td>Final exam</td>
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**LABORATORY OBJECTIVES**

Upon completing lab exercises students will demonstrate skills that relate to the following areas:

- Microscopy
- Handwriting and document examination
- Fingerprint classification
- Development of latent fingerprints (powder and chemical)
- Toolmark identification
- Firearms evidence
- Blood stain interpretation
- Materials evidence (hair, fiber, soil, etc.)
EXAMINATIONS

Three examinations will be given at appropriate intervals. Exams will cover lecture topics as well as information in the textbook. The format for the exams will be multiple choice and short answer. The final exam (exam #3) is cumulative. Exams are expected to be taken during their scheduled times. Students are responsible for the material presented in class, whether or not they are in attendance.

Make up exams will only be allowed if the instructor is notified prior to the exam. Exams must be made up within one week of the originally scheduled date. The instructor reserves the right to change the format of make up exams.

LABORATORY ASSESSMENT

There are eight lab sessions scheduled throughout the semester. Each student is expected to actively participate in every scheduled lab. Labs are designed to reinforce important lesson material and allow students the opportunity to apply what they have learned. Students can earn up to ten points per lab session (total 80 points) by attending and successfully completing each lab. There will be no make-ups for missed labs.

RESEARCH ASSIGNMENT

This assignment will require students to watch two television episodes that feature forensic science. Each episode should be a minimum of 30 minutes and from the following approved non-fiction list. Any other shows must be approved in advance by the instructor.

- Investigative Discovery - ID TV (Also available on You Tube; Includes About 48 Hours, Catch My Killer, Disappeared, Deadline: Crime, Deadly Women, and On the Case with Paula Zahn)
- 48 Hours Mystery True Crime Mysteries (You Tube)
- Investigative Reports (A & E)
- American Justice (A & E)
- Forensic Files (Court TV)
- The FBI Files (Discovery Channel)
- The New Detectives (Discovery Channel)
- History’s Crime and Trials (History Channel)
- Medical Detectives (The Learning Channel “TLC”)
- Secrets of the Dead (PBS)
- Nova (PBS)
Required Information

Include the name of the program and date/time of the programming at the top of the page, using APA documentation. The following information should be included:

1. Describe, in detail, the crime on which this show focused.
2. List all forensic evidence discussed in the program.
3. Explain how the perpetrator(s) was caught and punished?
4. What were the definitive keys to solving the crime? (Evidence? Eyewitness? Science?)
5. Select one individual who worked on the case. Provide the person’s name, title, and how he/she contributed to this investigation.
6. List three new facts that you learned from this program.

Assignments will be graded on content, grammar, and organization. Papers should be word processed and include a cover sheet with the student’s name, date, assignment title, course number and semester. Text should be double-spaced with one-inch margins using 12 font. APA guidelines should be followed. Consult the APA style guide, offered in the Media Center and on-line if you have additional questions. No assignments will be accepted by email.

Assignments are due Wednesday, November 9. Late assignments will result in a reduction of 10% for each calendar day late. No assignments will be accepted during the week of final exams.

Scoring Rubric: Research Project

<table>
<thead>
<tr>
<th>Category</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Content</td>
<td>30</td>
</tr>
<tr>
<td>Grammar, punctuation and style</td>
<td>10</td>
</tr>
<tr>
<td>Organization</td>
<td>5</td>
</tr>
<tr>
<td>Research (APA documentation)</td>
<td>5</td>
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</tbody>
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Electronic Assignment

Throughout the semester students be will be required to access the Electronic Library Database Collection for information on assigned topics. Students should be prepared to discuss that information with the class.

Writing Center

If you wish to have additional help on a writing assignment, you may schedule an appointment with a writing conference instructor by going to www.worwic.edu and
clicking on “Current Students” and then “Learning Resources” and “Writing Conferences.” Limited time slots are available, so an appointment is required. If you cannot keep your appointment, it is your responsibility to cancel any writing conferences by using this link.

ASSESSMENT

The final grade for this course will be based upon a scale of 455 points. Each of the three examinations is worth 100 points, lab exercises are worth a total of 80 points and the research project is worth 50 points. Students may earn up to 25 points for class participation. While there will necessarily be some subjectivity to awarding points for this, objective criteria such as attendance, punctuality, and class participation will be considered.

Computation of Final Grade

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>3 exams (100 points each)</td>
<td>300</td>
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<tr>
<td>Lab exercises (10 points each)</td>
<td>80</td>
</tr>
<tr>
<td>Research project</td>
<td>50</td>
</tr>
<tr>
<td>Class participation</td>
<td>25</td>
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<tr>
<td>Total possible points</td>
<td>455</td>
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Evaluation of Final Grade

A = 90%-100% (410-455 points)
B = 80%-90% (364-409 points)
C = 70%-80% (319-363 points)
D = 60%-70% (273-318 points)
F = 0%-60% (< 273 points)

CLASSROOM ETIQUETTE

Silence all cell phones and electronic devices. Text messaging is not permitted during class. Violations of this policy will result in loss of classroom participation points.

Students are expected to arrive on time and stay for the entire class. If a student is late or must leave early, please minimize disruption to the class. A late or early leave counts as ½ an absence. No side conversations or other distracting behaviors will be tolerated. Respect others by being polite and considerate.
ONLINE END-OF-COURSE EVALUATIONS

The College has selected SmartEvals as its vendor to conduct online end-of-course evaluations. The evaluations will become available starting November 25 and ending December 10. SmartEvals maintains the highest level of security with the evaluation information, and the information resides only on SmartEvals’ computer servers. Faculty are unable to identify individual evaluations, and any data which has the potential to reveal the identity of a student (i.e. the only male in a class) is blocked from viewing. You will receive automated emails from SmartEvals reminding you to complete your evaluations, and the timing of the emails is in compliance with anti-spam guidelines. The emails discontinue once all of your evaluations are completed. You will be able to access the evaluations through the link in the SmartEvals email or by clicking on “course evaluation” in the left menu of your Blackboard course website. The evaluations are only active during designated times at the end of the semester. Disable the pop-up blockers on your internet browser in order to access the evaluation. Your cooperation in completing the online evaluation at the designated time is greatly appreciated. The results from the course evaluation provide valuable feedback to your instructor in order to make changes as needed with curriculum and teaching. Please direct any questions about the online course evaluation system to Hope Ellis at hellis@worwic.edu.

ACADEMIC HONESTY

Students must comply with the standards of conduct mandated by college policy as outlined in the Appendix of the college catalogue. Any student caught plagiarizing or cheating on an assignment in violation of that policy will not receive credit for that assignment. At the discretion of the instructor, the student may also be referred to the Student-Faculty Disciplinary Committee.

MISCELLANEOUS

Class time will involve both lecture and class discussions covering subjects in the text and outside materials. Students are expected to complete all assigned reading prior to class, actively participate in class discussions, attend all classes, and be on time. Regular attendance and participation are the best ways to ensure success in this course. If a student experiences any course-related problems throughout the semester, please contact the instructor.
EMERGENCY INFORMATION STATEMENT

In the event of an emergency, health-related or other, that results in the suspension of classes, faculty will be communicating with students about their courses and course requirements, such as assignments, quiz and exam dates, and class and grading policies, via faculty websites or Blackboard. Students will be responsible for completing all these assignments in accordance with class policies. Information about the resumption of classes will be communicated via the College website and email system.

BLACKBOARD

Blackboard is being used as a supplementary site in this course. To access course content in Blackboard you need to have access to a computer with an Internet connection. (other requirements may apply). Computers that meet these requirements are available on campus in MTC 200, AAB 217, HH 100, GH 204, WDC 305, and AHB 108.

Please follow these directions to access course syllabi and any other materials posted for this course:

Login Information

1. From Wor-Wic home page, point to “Quick Links” (top right) and click the “Blackboard Login” link.

2. Enter your Wor-Wic user ID and password (same as your Wor-Wic email user ID and password). Don’t know your user ID or password? Contact Student Services.

3. You should then see a list of courses for which you are currently enrolled. Click on the course link for CMJ 103.

4. Find and click on the folder for the course resource you are looking for, i.e. course syllabus, Power Point presentations, study guides, etc.

ACADEMIC INTEGRITY AND COMPUTER USAGE POLICY

All students logging into Blackboard affirm that they understand and agree to follow Wor-Wic Community College policies regarding academic integrity and the use of College resources as described in the college catalog. Wor-Wic Community College considers the following as violations of the computer usage policy:

• Using the campus computing network and facilities to violate the privacy of other individuals.
• Sharing of account passwords with friends, family members or any unauthorized individuals

Violators are subject to college disciplinary procedures.