Instructors: Dr. John Edward Coratti, Director of Criminal Justice (Lecture) & Dr. Matt McClure, Coordinator of Math & Science (Lab)

Office Phones: 409 882-3353 & 409 882-3304
E-Mail Addresses: John.Coratti@lsco.edu; Matt. McClure@lsco.edu

CAVEAT! Students who have criminal records will not be able to take this course unless the OCSO requirement is waived by the Director of Criminal Justice.

Dr. McClure will hand out his syllabus during the first lab class.
Course: Forensic Science I

Course Description: FORS 2440
This course provides an in-depth study of crime scene investigation and evidence gathering. Utilizing lecture/lab analyses, the methods, procedures, techniques, and preservation of crime scene evidence will be presented as students learn “hands on” the proper procedures of evidence gathering and how scientific instrumentation has changed the courtroom into medico-legal suites. Specific labs include trace analysis of hair and fiber, stain analysis, epithelial cell analysis, latent fingerprint analysis, DNA sequencing, and other basic lab analytical techniques. Additional forensic information will be obtained from guest speakers, documented cases, and investigations that have reached a dead end resulting in cold case files. In the process, students will have “hands on” experience in the basic operation of a busy forensic lab. Facilities at the Orange County Sheriff’s Office and Crime Lab will also be utilized. (Description from Weatherford College Catalog for Forensic Science I)

General: FORS 2440 involves advanced crime scene analysis and evidence gathering with lectures and presentations on the various forensic sciences.

Credit Transfer:
Students must check in advance with the particular college to which they plan to transfer credit. The Lamar State College-Orange Criminal Justice Program has articulations for both forensic science courses (FORS 2440 and FORS 2450) with The University of Texas at Arlington and Texas Wesleyan University.

Prerequisites: Permission of the director of criminal justice is required for FORS 2440 & FORS 2450. Other prerequisites are as follows: FORS 2440 & FORS 2450=CRIJ 1310 and CRIJ 2314. A general chemistry course is strongly recommended. At the discretion of the director of criminal justice, other education and experience may be substituted for these prerequisites. The two forensic
science courses do not have to be taken in order of course number. You must not have a criminal record. Students with criminal records will be dropped from the class unless the Director of Criminal Justice waives the OCSO requirement. The Orange County Sheriff’s Office will run a criminal background check on all students. This is mandatory because part of the course requirement is working in CID at the Orange County Sheriff’s Office. However, the instructor may waive the OCSO requirement and assign other work.


Supplementary Materials: Texts and articles on reserve at the library

Evaluation Methods: {Class Presentations, Field Work, Papers, and Objective Tests.}

100 - 90 = A
89 - 80 = B
79 - 70 = C
69 – 60 = D
Below 60 = F

75% of the grade will come from the lecture portion of the class and 25% will be assigned from the lab portion of the class.

Policy on a Grade Incomplete:
The grade of “I” may be given when any requirement of the course, including the final examination, is not completed with instructor approval. Arrangements to complete deficiencies in a course must be made with the instructor. Incomplete work must be finished during the next long semester; if not, the Admissions and Records Office must change an “I” grade to the grade of “F.” The course must then be repeated, if credit is desired. An “I” grade also automatically becomes an “F” if the student registers for the course before removing the deficiencies and receiving a grade change. The instructor may record the grade of “F” for a student who is absent from the final examination and/or is not passing the course. 75 % of the course must be completed in order to be eligible for a grade of incomplete.

Procedure for Review of Test Grades:
If the student has an issue about his/her grade, the instructor must be contacted no later than three (3) days after receiving the grade.

Exam Schedule: (Lab tests will be scheduled by Dr. McClure)
Test I: I: There will be a quiz on chapter one of The Forensic Casebook before September 27; the quiz will count as one test grade.

November 24 (Wednesday) TEST II=Chapters 2-3 in the forensic science text for the lecture part of the course and class notes

Dec. 6 (Monday) TEST III=Chapters 4-5 in The Forensic Casebook and class notes

Exam= Lecture course=December 10, 2010 (Friday) 12:30-2:30 pm
Make-up Policy:

A student must make-up his/her work within one week of the missed assignment or test. If the student does not complete the missed assignment within the one week time period, a grade of 0 will be assigned for the missed test and/or work. The student must present the professor with a medical excuse or other legitimate reason for missing the test or work.

Classroom Policies:

No food, drink, tobacco, cell phones, etc.

Withdrawals and Drops:

Sept. 27, 2010 = Last day to drop or withdraw without academic penalty
Nov. 1, 2010 = Last day to drop or withdraw.

Never attending or ceasing to attend classes DOES NOT constitute a withdrawal or drop. You remain registered until you file a Drop/Withdrawal Form at the Registrar's Office by the appropriate deadlines. Failure to act in a timely manner will result in an "F" grade for the course. It is the student's responsibility to turn in all Drop/Withdrawal Forms and follow up to ensure that they were processed as desired.

If a student is absent during a scheduled class activity, grades of 0 will be assigned for each absence. Each 0 will count as a test grade.

Instructor-Initiated Drop:

Students will be dropped for excessive absences, disruptive behavior, dishonesty, violating uniform policy, etc. A student may also be dropped after a criminal background check reveals the existence of a criminal record.

Academic Honesty:

LSCO will not tolerate cheating or plagiarism. Plagiarism is defined as "taking and using as one's own the writings or ideas of another."

Any student caught cheating or plagiarizing, or aiding another student in cheating or plagiarizing on a quiz, test, individual assignment, or examination will receive the grade of “F” for the course.

Students subject to penalty due to academic dishonesty have the right to appeal to the department chair and eventually to the dean and/or academic vice president before imposition of the penalty.

Student with Disabilities:

A request for special accommodations must be made through the ADA Counselor and the appropriate form submitted to the instructor two weeks in advance of need.

Any student with a verifiable learning or physical disability who requires special accommodations is encouraged to speak to the instructor in private regarding his/her special accommodations need.

Children in the Classroom:

The LSCO Student Handbook specifies that no children under the age of 15 are allowed in the classroom or the hallways.
Syllabus Content:
The instructor reserves the right to make changes to this syllabus, if deemed necessary. All changes will be provided to the students orally or in writing before the implementation of the change. This syllabus is not a contract.

Suggested Reference and Supplementary Reading Material:
(Many of the references listed below are academic and professional works; however, some are mass-market and trade books. These sources can be used for research and extra-credit.)

Crime Scene Investigation: The Forensic Technician’s Field Manual by Tina Young and P.J. Ortmeier 2011
Forensics Demystified by Barry Fisher et al 2006
Forensic Science: Fundamentals and Investigations by Anthony J. Bertino 2008
Forensic Science: A Very Short Introduction by Jim Fraser 2010
Fundamentals of Forensic Science Second Edition by Max M. Houck and Jay A. Siegel 2010

Careers in Forensics by Linda D. Williams 2008
Opportunities in Forensic Science by Blythe Camenson 2008

Feder’s Succeeding as an Expert Witness Fourth Edition by Harold A. Feder and Max M. Houck 2008

Forensic Entomology: An Introduction by Dorothy E. Gennard 2007
Entomology and the Law: Flies as Forensic Indicators by Bernard Greenberg and John Charles Kunich 2002
<table>
<thead>
<tr>
<th>Title</th>
<th>Author(s)</th>
<th>Year</th>
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<tr>
<td>Maggots, Murder, and Men: Memories and Reflections of a Forensic Entomologist</td>
<td>Zakaria Erzinclioqlu</td>
<td>2003</td>
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<td>A Fly for the Prosecution</td>
<td>M. Lee Goff</td>
<td>2001</td>
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<td>Forensic Taphonomy: The Postmortem Fate of Human Remains</td>
<td>William D. Haglund and Marcella Harnish Sorg</td>
<td>1997</td>
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<tr>
<td>Advances in Forensic Taphonomy</td>
<td>William D. Haglund and Marcella H. Sorg</td>
<td>2001</td>
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<td>Stiff: The Curious Lives of Human Cadavers</td>
<td>Mary Roach</td>
<td>2004</td>
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<td>The Use of Forensic Anthropology</td>
<td>Robert B. Pickering and David Bachman</td>
<td>2009</td>
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<td>Beyond the Body Farm: A Legendary Bone Detective Explores Murders, Mysteries and the Revolution in Forensic Science</td>
<td>Bill Bass and Jon Jefferson</td>
<td>2007</td>
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<td>The Bone Lady: Life as a Forensic Anthropologist</td>
<td>Mary H. Manhein</td>
<td>2000</td>
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<td>Introduction to Forensic Anthropology 3rd Edition</td>
<td>Steven N. Byers</td>
<td>2007</td>
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<td>Dead Men Do Tell Tales: The Strange and Fascinating Cases of a Forensic Anthropologist</td>
<td>William R. Maples and Michael Browning</td>
<td>1995</td>
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<td>Forensic Anthropology and Medicine: Complementary Sciences From Recovery to Cause of Death</td>
<td>Aurore Schmitt et al</td>
<td>2006</td>
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<td>Flesh and Bone: An Introduction to Forensic Anthropology</td>
<td>Myriam Nafte</td>
<td>2009</td>
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<td>Body of Evidence: What the Post-mortem Revealed-40 Years as a Forensic Pathologist</td>
<td>David Bowen</td>
<td>2003</td>
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<td>Forensic Pathology for Police, Death Investigators, Attorneys, and Forensic Scientists</td>
<td>Joseph A. Prahlw</td>
<td>2010</td>
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<td>Diagnoses from the Dead: The Book of Autopsy</td>
<td>Richard Prayson</td>
<td>2009</td>
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<td>Handbook of Autopsy Practice</td>
<td>Brenda L. Waters</td>
<td>2009</td>
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<td>Guidelines for Reports by Autopsy Pathologists</td>
<td>Vernard Irvine Adams</td>
<td>2008</td>
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<td>Color Atlas of Forensic Medicine and Pathology</td>
<td>Charles A. Catanese</td>
<td>2009</td>
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<tr>
<td>Color Atlas of Forensic Histopathology</td>
<td>Vittorio Fineschi and Steven B. Karch, M.D.</td>
<td>2011</td>
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<tr>
<td>Principles of Forensic Histopathology</td>
<td>Paul Fornes</td>
<td>2006</td>
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Essential Forensic Neuropathology by Juan C. Troncoso 2009

An Introduction to the Work of a Medical Examiner: From Death Scene to Autopsy Suite by John J. Miletich and Tia Laura Lindstrom 2010
Unnatural Death: Confessions of a Medical Examiner by Michael M. Baden 1990
Dead Center: Behind the Scenes at the World’s Largest Medical Examiner’s Office by Shiya Ribowsky and Tom Shachtman 2007
Blood On The Table: The Greatest Cases of New York City’s Office of the Chief Medical Examiner by Colin Evans 2008
Coroner by Thomas T. Noguchi 1985
Coroner at Large by Thomas T. Noguchi 1986
Tales From the Morgue by Cyril H. Wecht et al 2005
Dissecting Death: Secrets of a Medical Examiner by Frederick Zugibe M.D. and David L. Carroll 2006
Death Investigation in America: Coroners, Medical Examiners, and the Pursuit of Medical Certainty by Jeffrey M. Jentzen 2009

Forensic Nurse: The New Role of the Nurse in Law Enforcement by Serita Stevens 2006
Forensic Nursing Science by Virginia A. Lynch and Janet Barber Duval 2010
Forensic Nursing by Kelly Pyrek 2006

Forensic Medicine by Howard C. Adelman and Lawrence Kobilinsky 2006
Principles of Forensic Medicine by Stephen P. Robinson 2008
Forensic Medicine in Western Society: A History by Katherine Watson 2010

Hot Zone Forensics: Chemical, Biological, and Radiological Evidence Collection by Steven C. Drielak 2004
Justice for the Dead: Forensic Pathology in the Hot Zone by Malcolm J. Dodd 2006
Chemical and Physical Signatures for Microbial Forensics by John B. Cliff and Helen Kreuzer-Martin 2010

Principles of Forensic Toxicology 3rd Edition by Barry Levine 2010
Handbook of Forensic Toxicology for Medical Examiners by D.K. Molina M.D. 2009
Forensic Toxicology Methods, Editors Bruce A. Goldberger & Daniel S. Isenschmid 2006
Postmortem Toxicology of Abused Drugs by Steven B. Karch MD 2007
Killer Wallpaper: True Cases of Deadly Poisonings by Anna Prokos 2007
Clinical Toxicological Analysis: Procedures, Results, Interpretations, Vols. 1 & 2 Wolf Rudiger Kulpmann, Editor 2009
Clinical Toxicology: Principles and Mechanisms by Frank A. Barile 2003
A Textbook of Modern Toxicology by Ernest Hodgson 2010

Forensic Chemistry by David E. Newton 2008
Crime Scene Chemistry for the Armchair Sleuth by Cathy Cobb, Monty L. Fetterolf, and Jack G. Goldsmith 2007
Illegal Drugs: A Complete Guide to Their History, Chemistry, Use and Abuse by Paul Gahlinger 2001

Forensic Botany: Principles and Applications to Criminal Casework by Heather Miller Coyle 2004
Entomology and Palynology: Evidence from the Natural World by Maryalice Walker 2005

Essential Forensic Biology Second Edition by Alan Gunn 2009
Forensic Biology: Identification and DNA Analysis of Biological Evidence by Richard Li 2008

Molecular Forensics by Ralph Rapley and David Whitehouse 2007
Molecules of Murder: Criminal Molecules and Classic Cases by John Emsley 2008
The 13th Element: The Sordid Tale of Murder, Fire and Phosphorus by John Emsley 2002


Handbook of Forensic Genetics by Niels Morling 2010
An Introduction to Forensic Genetics by Dr. William Goodwin, Adrian Linacre and Dr. Sibte Hadi 2007
Fundamentals of Forensic DNA Typing by John M. Butler 2009
A Litigator’s Guide to DNA: From the Laboratory to the Courtroom by Ron C. Michaelis et al 2008
Blood Evidence: How DNA is Revolutionizing the Way We Solve Crimes by Henry C. Lee 2003
Pointing From the Grave: A True Story of Murder and DNA by Samantha Weinberg 2003
Statistical DNA Forensics: Theory, Methods and Computation by Wing Kam Fung and Yue-Qing Hu 2008
The Double Helix and the Law of Evidence by David H. Kaye 2010

Sourcebook in forensic serology, immunology, and biochemistry by R.E. Gaensslen 1983
Essentials of Immunology and Serology by Jacqueline Stanley 2002
Forensic Serology, A.D. Beveridge, Editor 2005
Blood Dynamics by Anita Y. Wonder 2001
Blood Secrets: Chronicles of a Crime Scene Reconstructionist by Rod Englert, Kathy Passero & Ann Rule 2010
Principles of Bloodstain Pattern Analysis: Theory and Practice by Stuart H. James, Paul E. Kish, and T. Paulette Sutton 2005

An Introduction to Forensic Linguistics by Malcolm Coulthard and Alison Johnson 2008
Wordcrime: Solving Crime Through Forensic Linguistics by John Olsson 2009
The Routledge Handbook of Forensic Linguistics by Malcolm Coulthard and Alison Johnson 2010
Linguistics in the Courtroom: A Practical Guide by Roger W. Shuy 2006

Scientific Examination of Questioned Documents, Second Edition by Kelly and Brain S. Lindblom 2006

Forensic Genealogy by Colleen Fitzpatrick 2005

Financial Investigation and Forensic Accounting, Third Edition by George A. Manning 2010
Forensic Accounting and Fraud Examination by Mary-Jo Kranacher et al 2010

Faces of Evil by Lois Gibson and Deanie Mills 2007
Computer-Graphic Facial Reconstruction by John G. Clement and Murray K. Marks 2005

Soil Analysis in Forensic Taphonomy: Chemical and Biological Effects of Buried Human Remains by Mark Tibbett and David O. Carter 2008
Criminal and Environmental Soil Forensics by Karl Ritz et al 2008
Evidence from the Earth: Forensic Geology and Criminal Investigation by Raymond C. Murray 2004
http://www.forensicgeology.net/science.htm

Forensic Recovery of Human Remains: Archaeological Approaches by Tosha L. Dupras et al 2005
Forensic Archaeology and Human Rights Violations by Roxana Ferllini 2007

Veterinary Forensics: Animal Cruelty Investigations by Melinda D. Merck 2007
Animal Abuse and Unlawful Killing: Forensic Veterinary Pathology by Ranald Munro and Helen M.C. Munro 2008

Forensic Structural Engineering Handbook by Robert Ratay 2009
Beyond Failure: Forensic Case Studies of Civil Engineers by Norbert J. Delatte 2008

Handbook of Firearms and Ballistics: Examining and Interpreting Forensic Evidence by Brian J. Heard 2008
Firearms, the Law, and Forensic Ballistics Second Edition by T.A. Warlow 2004
Silent Evidence: Firearms, Forensic Ballistics and Toolmarks—Cases from Forensic Science by Charles Meyers 2004
Digital Forensics: Digital Evidence in Criminal Investigations by Angus M. Marshall 2009

Case Files of a Forensic Handwriting Analyst by Ms. Treyce d’Gabriel 2008
Detecting Forgery: Forensic Investigation of Documents by Joe Nickell 2005
Document Analysis by Elizabeth Bauchner 2005
Forensic Document Examination Techniques by Thomas W. Vastrick 2004
Mechanisms: New Media and the Forensic Imagination by Matthew G. Kirschenbaum 2008

Forensic Aspects of Speech Patterns: Voice Prints, Speaker Profiling, Lie and Intoxication Detection by Dennis C. Tanner and Matthew E. Tanner 2004

Dental Autopsy by William E. Silver and Richard R. Souviron 2009
Forensic Dental Evidence: An Investigator’s Handbook by C. Michael Bowers D.D. S., J.D. 2004
Forensic Dentistry Second Edition David R. Senn and Paul G. Stimson Editors 2010

Underwater Forensics by Gail B. Stewart 2010
Underwater Forensic Investigation by Ronald F. Becker 2005

Forensic Crime Scenes: Health and Safety by Gareth W. Roberts 2010
Forensic Fire Scene Reconstruction by David Icove and John DeHaan 2003
Forensic Investigation of Explosions, Editor, A.D. Beveridge 1996
Henry Lee’s Crime Scene Handbook by Henry Lee et al. 2005
Cracking Cases: The Science of Solving Crimes by Henry Lee 2009
Crime Scene Investigation by Cyril H. Wecht 2004
An Introduction to Crime Scene Investigation by Aric W. Dutelle and Joseph LeFevre 2010

Forensic Analysis on the Cutting Edge: New Methods for Trace Evidence Analysis by Robert D. Blackledge 2007
Forensic Examination of Glass and Paint: Analysis and Interpretation by Brian Caddy 2001

Advanced Crime Scene Photography by Christopher D. Duncan 2010
Forensic Photography: Importance of Accuracy by Sanford L. Weiss 2008

Why Mothers Kill: A Forensic Psychologist’s Casebook by Geoffrey R. McKee 2006
The Postpartum Effect: Deadly Depression in Mothers by Arlene Huysman 2003
Minds on Trial: Great Cases in Law and Psychology by Patrick Ewing and Joseph T. McCann 2006
Fundamentals of Forensic Practice: Mental Health and Criminal Law by Richard Rogers and Daniel Shuman 2005
Principles and Practice of Forensic Psychiatry by Richard Rosner 2003
Diagnostic and Statistical Manual of Mental Disorders DSM-IV-TR Fourth Edition by American Psychiatric Association 2000
Without Conscience: The Disturbing World of the Psychopaths Among Us by Robert D. Hare 1999
Psychology of Deception: Analysis of Sexually Psychopathic Serial Crime by Don Jacobs 2009
Criminal Psychology: sexual predators in the age of NEUROSCIENCE, Second Edition by Don Jacobs 2005

Why Kids Kill: Inside the Minds of School Shooters by Peter F. Langman 2009
Columbine by Dave Cullen 2010
Inside the Minds of Healthcare Serial Killers: Why They kill by Katherine Ramsland 2007
Bloodsworth: The True Story of the First Death Row Inmate Exonerated by DNA by Tim Junkin 2004
Killer Catchers by Andy Owens and Chris Ellis 2008
My Life Among the Serial Killers: Inside the Minds of the World’s Most Notorious Murderers by Helen Morrison and Harold Goldberg 2005
The Devil’s Dozen: How Cutting-Edge Forensics Took Down 12 Notorious Serial Killers by Katherine Ramsland 2009
The Poisoner’s Handbook: Murder and the Birth of Forensic Medicine in Jazz Age New York by Deborah Blum 2010
Famous Forensic Cases by Rebecca Stefoff 2008
Little Book of Forensics by David Owen 2008
Solving Crimes: Pioneers of Forensic Science by Ron Fridell 2000
Forensic Fingerprints: Remarkable Real-Life Murder Cases Solved by Forensic Detection by Hugh Miller 1998
An Expendable Man: The Near-Execution of Earl Washington, Jr. by Margaret Edds 2006
Fifty Years of Forensic Science by Niamh Nic Daeid 2010
The Father of Forensics: The Groundbreaking Cases of Sir Bernard Spilsbury and the Beginnings of Modern CSI by Colin Evans 2006
Jumped, Fell, or Pushed: How Forensics Solved 50 “Perfect” Murders by Stephen A. Koehler, Peter Moore, and David Owen 2009
Slaughter on a Snowy Morn: The Death Penalty Case That Revolutionised Forensic Science by Colin Evans 2010

Challenges to Fingerprints by Lyn Haber and Ralph Norman Haber 2009

Introduction to Fingerprint Comparison by Gary W. Jones 2000


Extreme Measures: The Dark Visions and Bright Ideas of Francis Galton by Martin Brookes 2004


50 Largest Crime Labs, 2002 by Bureau of Justice Statistics 2010

All questions about the lab portion of this class must be directed to Dr. McClure.

The Forensic Casebook by N.E. Genge Class Presentation Assignments:

1. The Scene of the Crime

2. Working the Scene: The Evidence

3. Working the Scene of the Body Human

4. Working the Scene: Different Stages

5. Working the Scene: Different Skills

The above section presentations are scheduled during the semester. Your presentation will be measured by the following factors: content of the material presented from the chapter and the students’ understanding of that content, which will be tested by questions from the instructor. If you
are absent or unprepared for your chapter presentation, a grade of 0 will be assigned; the 0 will be equivalent to one test grade.

Each student must read all of the chapters in the text, but groups will be assigned for each of the five sections in the text. Students must also research related topics from their assigned book sections and bring that research material to class. Each group will be responsible for their section oral presentation and the research material for that section must also be presented to the class.

**Critical Thinking**

Upon completion of the course, the student will be able to: Demonstrate critical thinking skills as evidenced by the ability to analyze facts, synthesize factual information and evaluate opinions in light of the facts presented throughout this course. Critical thinking is a process involving higher order thinking skills. These skills include, but are not limited to, application, analysis, synthesis, and evaluation of factual information. Lamar State College Advances Critical Thinking Skills (LSC-O ACTS) through assignments of varying natures within the courses that are designed to challenge and improve the student’s critical thinking processes.

Example; Students will be given advanced forensic science concepts and will have to apply the concepts to a complicated crime scene and legal exercise for the final exam; thereby demonstrating powers of analysis, synthesis, and evaluation.

“A well cultivated critical thinker:

Raises vital questions and problems, formulating them clearly and precisely;

Gathers and assesses relevant information, using abstract ideas to interpret it effectively;

Comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards; Thinks open-mindedly within alternative systems of thought, recognizing and assessing, as need be, their assumptions, implications and practical consequences; and

Communicates effectively with others in figuring out solutions to complex problems.”


Students in this course will be expected to attend “hands-on” forensic science sessions at the Orange County Sheriff’s Office CID and Crime Lab. We will have classes that will be held at the Orange County Sheriff’s Office. Later in the semester, the professor will give out a schedule for those classes. Failure to attend these sessions at the OCSO will adversely impact your grade. However, the professor may also waive the OCSO requirement for the class and assign other work for exempted students.
Research Presentation Requirements:

A student must select from one of the forensic science topics below and give an oral presentation to the class on that topic. If the student is absent or unprepared, a grade of 0 will be given and the 0 will count as a test grade. The presentations will be given throughout the semester. The topics must be well researched. The professor will give adequate notice for the dates of these presentations. The forensic science topic must be researched and the material must be presented by the student in the form of an oral report to the class.

Forensic Pathology

Forensic Neuropathology

Forensic Histopathology

Forensic Autopsy

Forensic Toxicology

Forensic Anthropology

Forensic Entomology

Forensic Engineering

Forensic Odontontology

Forensic Art

Forensic Photography

Forensic Psychology/Psychiatry

Forensic Nursing

Forensic Medicine

Cyber Forensics

Forensic Ballistics

Forensic Serology

Forensic Genetics

Forensic Genealogy

Forensic Handwriting Identification

Forensic Document Analysis
Forensic Linguistics

Forensic Voice Identification

Forensic Chemistry

Forensic Biology

Forensic Microscopy

Forensic Botany

Forensic Geology

Forensic Palynology (pollen and spore evidence)

Forensic Taphonomy (postmortem processes)

Hot-Zone Forensics (chemical, biological and radiological evidence within the context of terrorist crime scenes)

Veterinary Forensics

Forensic Zoology

Remember, these forensic science reports must place an emphasis on the use of the particular science or study within its legal and crime scene contexts. If the student is absent or unprepared when these forensic science reports are given, a grade of 0 will be given. The 0 will count as a full test grade. The report on the forensic specialty will be measured by the following factors: content, research and understanding of the topics covered.

Additional Class Presentations for the Semester:

The following famous forensic science cases will be assigned and the student must give a class presentation for their assigned forensic science case topic. A student’s failure to prepare for the topic and presentation will result in a grade of 0 and that 0 will count as a test grade. If you are absent on the day of your presentation without a valid excuse, a grade of 0 will also be assigned.

You must research your assigned case on the Internet and present a narrative of what happened in the famous case to the class. You must also point out the forensic science aspects of the case to the class. Also, give a detailed description of the crime scene(s) involved.

Dr. Hawley Harvey Crippen

The World Trade Center Cases
Phil Spector Murder Trial

The Lindbergh Kidnapping

Sacco and Vanzetti

Colin Pitchfork

Kirk Bloodsworth

Richard Ramirez

John Wayne Gacy

Theodore Bundy

John List

Josef Mengele

Pan Am Flight 103

The Oklahoma City Bombing

Jack the Ripper

Lindy Chamberlain

Clifford Irving

OJ Simpson Trials

Dean Corll and the Houston Mass Murders

Sam Sheppard Murder Case

Kitty Genovese

Zodiac Killer

Jon Benet Ramsey

Natalee Holloway

Stephany Tatiana Flores Ramirez

Chandra Ann Levy
Black Dahlia Murder Case (Elizabeth Short)

Bonny Lee Bakley

Dennis Rader (BTK)

Ed Gein

David Berkowitz

Colin Ferguson

Scott Peterson

Andrea Yates

Amy Fisher

Susan Smith

Pamela Smart

Martha Moxley

The Menendez Brothers

Claus von Bulow

The McMartin PreSchool Trials

Ira Einhorn

Aileen Wuornos

George Reeves (Superman) suicide/murder case

Other Famous Cases with a forensic science emphasis:

Unabomber Case

Beltway Snipers Case

Anthrax/Amerithrax

FINAL EXAM INSTRUCTIONS

The student will receive two grades for the final exam—one for the oral presentation and one for work product, e.g., research, reports, documents, etc.

We will work on the final exam throughout the semester. The final exam will deal with the well known Dr. Jeffrey MacDonald case. The web sites listed below will be used as resource material for the final exam:
The Jeffrey MacDonald Information Site
http://www.themacdonaldcase.org/

truTV The Crime Library

The following books may also be useful:

Fatal Vision by Joe McGinniss

Fatal Justice:Reinvestigating the MacDonald Murders by Jerry Allen Potter & Fred Bost

Students will also research the case and find other materials on the Dr. Jeffrey MacDonald murder cases. He was a medical doctor and a captain in the Green Berets, who was charged with the murders of his two young daughters and his wife. The crime occurred on February 17, 1970. MacDonald was subsequently convicted in federal court for those murders. He has been serving three consecutive life sentences since 1979. MacDonald has appealed his case many times and still hopes for a new trial based upon new evidence. There has been new evidence, but there are arguments on both sides as to MacDonald’s innocence or guilt.

Applying what you have learned during the semester and using the critical thinking skills of a crime scene investigator or forensic scientist, the class will research the MacDonald murders and present arguments and evidence about this case.

TEAM BLACKBURN will present the arguments and evidence for the prosecution’s case. TEAM MACDONALD will present the arguments and evidence for the defense’s case. However, this will not be a trial. We will pretend that a motion for a new trial was granted for MacDonald. Thus, both sides are now examining the arguments and evidence that may be presented during the trial.

Please place your name under one of the two investigative team designations.

TEAM BLACKBURN:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
McGinness’ theory of this case and its forensic evidence presents a pro prosecution version of what happened. Take notes on the film and be prepared to use the critical thinking skills of a forensic scientist or crime scene investigator in order to support or rebut its conclusions.

The following are crime scene or forensic science topics and issues that each team will have to deal with per the presentations. Of course, Team Blackburn will present from a prosecution point of view and Team MacDonald will present from a defense point of view. Each student should take a topic or topics and be responsible for that research and that presentation. Remember, you will receive two grades for the final exam—one for work product and one for the oral presentation. The work product will include research, notes, etc.

**Crime Scene Topics:**

**Statements made by MacDonald and others**

**The Article 32 Army hearing required by the Uniform Code of Military Justice**

**Integrity of evidence and crime scene contamination**

**Chain of custody or chain of evidence**

**Standard of comparison**

**Staging of the crime scene**

**The Helena Stoeckley and Greg Mitchell issues**
MacDonald’s career, record and other issues or problems relating to him

Physical evidence at the crime scene:

Trace and fiber

Hair and skin found under the victims’ fingernails

Wax drippings and the burnt match

Bloody syringe and bloody gloves

Ice pick

Blood stains

Photographic evidence

The “pajama folding experiment”

Bloody foot print evidence

DNA Evidence

Inculpatory Evidence

Exculpatory Evidence

Expert report of forensic psychiatrist Dr. James Brussel

Retired U.S. Marshall Jimmy B. Britt’s Affidavit

Recent Affidavits of Donald Buffkin, Everett Morse, Bryant Lane and Others

FBI Laboratory Issues and Problems

Other topics and issues that you develop as part of your research

Good Luck!
Forensic Science I  Dr. John Edward Coratti  FALL 2010

Forensic Science or criminalistics* is “the application of science to those criminal and civil laws that are enforced by police agencies in a criminal justice system.” From: Criminalistics: An Introduction to Forensic Science Ninth Edition by Richard Saferstein Upper Saddle River, New Jersey: Pearson/Prentice Hall, 2007 *There are technical differences between forensic science and criminalistics and we will cover those differences in class.

Corpus delicti is a Latin phrase and means the body of the crime. Every crime has a corpus delicti; it is an important concept in criminal investigation, law and criminalistics. The concept also relates to the physical evidence of an offense found at the crime scene:

“Corpus delicti is not just just the body in a death investigation, as the literal translation from the Latin would indicate, but is the determination of the essential facts that will show that a crime has occurred. The essential facts are the physical evidence, patterns of evidence at the scene, and any lab results of testing of the physical evidence.” FROM: Henry Lee’s Crime Scene Handbook by Henry Lee, et al. San Diego, CA: Elsevier Academic Press, 2005

Worksheet for “Forensic Science: A Shred of Evidence”

Watch the training video, “Forensic Science: A Shred of Evidence” and answer the following questions:

What is the theory of interchange?

What does a forensic scientist do within the context of a criminal investigation?

What is the chain of evidence or chain of custody and how does it apply to a forensic scientist?

How was the terrorist case investigated and how do the principles of forensic science apply to the investigation?

What principles of forensic science apply to the rape cases delineated in the training video?

Describe the activities of the following forensic scientists:

Forensic toxicologist:

Forensic pathologist:
Forensic odontologist:

Describe the purpose of a mass spectrometer:

How was the murder case of the actor Peter Arne investigated and how did forensics apply to evidence at the crime scene?

Forensic scientists are experts in their specific forensic science fields and often testify in court. In court, they must be certified as experts in the field per the subject matter of their testimony. The following case relates to expert testimony in court: [In CRIJ 2314, Criminal Investigation, we covered the Frye and Daubert standards and covered the Daubert-Kelly standards for Texas. Frye v. United States, 293 F. 1013 (D.C. Cir. 1923); Daubert v. Merrell Dow Pharmaceuticals, Inc. 509 U.S. 579 (1993); Kelly v. State, 824 S.W. 2d 568 (Tex. Cr. App. 1992)]


Find the above case on Lexis-Nexis and bring a copy of the case to class. Read the case and take notes on the following:

How does the case relate to forensic science?

What are the facts in the case?

What is the procedure in the case?

What does the Court say about the various issues?

What are the holdings in the case and how do the holdings relate to expert forensic testimony?

We will cover this case later in the semester.

Mock Motion Hearing

We will also have a mock motion hearing involving the particulars of the Kumho as it relates to expert testimony. Remember, Kumho held that Daubert applies not only to testimony based on scientific knowledge, but also to testimony based on technical and other specialized knowledge. Our motion hearing will involve the admissibility of testimony on questioned/forensic document examination and the forensic document examiner. You must read the Kumho case and research
Qualifying a Forensic Scientist as an Expert Witness Exercise

After the professor gives his lecture on the qualifying question format for a forensic scientist as an expert witness during voir dire, the student will research one of the forensic science specialties and construct a CV (Curriculum Vitae) for an expert in a particular forensic science specialty. The CV must reflect the background and experience needed for an expert witness per the qualifying question format.

The professor will then divide the class into teams and these teams will practice a mock voir dire of an expert witness in forensic science. One student will play the expert and the other students will represent prosecution or defense. However, every student must play the expert witness at least once in the exercise. Grades of 0 will be assigned if the student is absent or unprepared for this exercise.

Attention Students: The support system for your course is Desire2Learn (D2L). On this site you will be able to access your syllabus and any other documents your instructor wishes for you to access. However, your primary email system remains MyLSCO.

Lamar State College-Orange has moved to this system to provide continuous support and communication should the College be required to close campus for any length of time (hurricane evacuation, health-related emergencies such as H1N1 outbreak, etc.). The D2L system is located OFF CAMPUS and outside of Texas. Therefore, even when our system is “down” you can still access this course. To access this course when our site is down, you will go to http://lsco.desire2learn.com. To log in to D2L directly, you should use your MyLSCO username and your date of birth (MMDDYY) as the password.

D2L Calendar Assignments:

Week of August 23-27: Please read Chapter One in The Forensic Casebook and prepare for a test on that material in the chapter.

Week of August 30-September 3: Research the various forensic science specialties and take notes on each forensic science discipline.
Week of September 6-10:
Research the following question: What is the difference between forensic science and criminalistics? Be prepared to discuss the results of your research.

Week of September 13-17:
Please read Chapter Two in the forensic science text and take notes on the content in the chapter. Describe the various types of forensic evidence found at the crime scene and how the crime scene is “worked.”

Week of September 20-24:
Research fuming with Super Glue, a cyanoacrylate and be able to explain this “common chemical treatment in printing nonporous objects.” Genge, p. 45.

Week of September 27-October 1:
Research blood spatter patterns and find out how blood evidence is not only important for DNA procedures, but also for other crime scene applications.

Week of October 4-8:
Determine what forensic science studies are involved in the evaluation of blood spatter patterns.

Week of October 11-15:
Please read Chapter Three in your forensic science text and describe how evidence is found on and inside the human body at the crime scene. Also, describe the various forensic science studies that are involved in processing evidence taken from the human body.

Week of October 18-22:
Please research forensic odontology or forensic dentistry and outline the job of the forensic odontologist.

Week of October 25-29:
Please research forensic anthropology and be prepared to report on the importance of this forensic science study. The professor will give extra-credit for a report on Dr. Bill Bass and “The Body Farm.”
Week of November 1-5:
Read the section in Chapter Three of your forensic science text on forensic autopsy and elaborate on the goals of a forensic autopsy.

Week of November 8-12:
Study for the test on chapters two and three in your text.

Week of November 15-19:
Read Chapter Four in your forensic science text and take notes on the chapter. Pay particular attention to the following areas of forensic interest: bombs, explosives, and computer crime.

Week of November 22-24:
Read Chapter Five in your forensic science text and take notes on the chapter.

Week of November 29-December 3:
Study for the final objective test in FORS 2440.

Week of December 6-7 (last class day): Prepare for the final examination project in the forensic science lecture part of the course.