



**Department of Justice Studies
FS 11 Survey of Forensic Science,
CRN 44178, Fall 2017**

Instructor	Dr. Shawna Bolton
Office Location	MacQuarrie Hall 511
Instructor Email	shawna.bolton@sjsu.edu
Office Hours	Drop in: TH 11:30a-12:30p and 1:30p-2:30p OR by appointment
Canvas Website	https://sjsu.instructure.com/ To login, use Tower ID Card and Password > Courses > FS 11
Class Days/Time	T & TH 4:30p-5:45p
Prerequisites	None
FS Library Liaison	Silke Higgins silke.higgins@sjsu.edu
FS Lib Guide	http://libguides.sjsu.edu/content.php?pid=57768&sid=2450175

Course Description

This survey course introduces students to the profession of forensic science. Topics include the history and sub-disciplines of forensic science, and the scientific methods and analytical instrumentation used for the recognition, documentation, collection, preservation, and analysis of physical evidence.

Disclaimer: *This class is intended for mature students and may cover graphic content, such as criminal cases, discussions, and/or topics. Most of the material presented will NOT be censored. Under NO CIRCUMSTANCES are students permitted to take photos of the lecture slides and/or photos. Failure to comply with these guidelines may result in academic penalty.*

Outlines will be provided or made accessible via Canvas for each lecture pertaining to the topic that will be discussed.

Note: This course is required for FS majors and FS minors. Recommended for JS majors, and any student with a general interest in Forensic Science.

Course Goals and Student Learning Objectives

Upon successful completion of this course, students will be able to:

LO1 Understand the roles of forensic and investigative personnel, their separate duties and how they work together.

LO2 Articulate a realistic perspective of the field of forensic science, the nature of the work, its limits, challenges, and successes.

LO3 Define important terms, concepts and principles such as: “CSI Effect”, 4th Amendment, chain of custody, scientific method, pattern evidence, identification evidence, individualized evidence, class and individual characteristics, probative value, and the Locard Exchange Principle.

LO4 Demonstrate understanding of genetic principles such as inheritance, DNA, STRs, alleles, genotype, phenotype, and PCR. Explain the history of DNA profiling.

LO5 Display foundational knowledge in the history of forensic science, the structure and organization of crime labs, the analytical processes and procedures used, the sub-disciplines and contributing sciences of forensic science, and the types of evidence encountered.

Required Texts/Readings

James, S., Nordby, J., & Bell, S. (2014). *Forensic Science: An Introduction to Scientific and Investigative Techniques, 4/E*. Boca Raton, FL: CRC Press/Taylor & Francis ISBN-13: 9781439853832- this book is also required for FS 162. Keep it if you plan to continue in FS.

Additional required readings, tutorials, videos, and links will be posted on Canvas.

Assignments

1. Exams (50%): There will be two exams in this class (one for each module). Format will include multiple choice, matching, true/false, and short answer. (LO1-5)
2. Case Project & Presentation (10%): Each student will create and upload a Powerpoint Presentation on one criminal case in which forensic evidence played a critical role. Additional assignment details will be posted on Canvas. (LO6)
3. Discussion Board (20%): The purpose of the discussion board is to answer questions and ideas. Some discussion questions will be based on required readings or videos. For every discussion question, students must post, at minimum, one substantive response to the question, and one substantive response to a classmate’s post. A substantive post is one that is meaningful and specific, and moves the conversation forward. A non-substantive post is one that is vague, simply repeats or restates what someone else has already said, or just agrees with or compliments someone else. No credit will be given for non-substantive posts. (LO1-5)
4. Chapter Review Questions/Worksheets (20%): Chapter review questions can be found at the end of each chapter. Upload your responses to Canvas by the due date. Worksheets on videos, or other topics may also be distributed. (LO 1-5)

All assignments are graded based on adherence to directions, thoroughness, thoughtfulness, clarity, and logic. **Note:** A final grade of C or better is required for all Justice Studies and Forensic Science major and minor coursework.

Grading Scale for All Assignments

<u>Letter Grade</u>	<u>Percent</u>	<u>Letter Grade</u>	<u>Percent</u>	<u>Letter Grade</u>	<u>Percent</u>
A+	97-100	C+	77-79.9	F	<60
A	94-96.9	C	74-76.9		
A-	90-93.9	C-	70-73.9		
B+	87-89.9	D+	67-69.9		
B	84-86.9	D	64-66.9		
B-	80-83.9	D-	60-63.9		

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Extra Credit

Extra credit opportunities may be available throughout the semester and will be used to augment your final grade up to 3%.

1. Join a professional organization (CAC, AAFS, IAI, *etc.*) that is of specific interest to *you* and supply proof of membership before the end of the semester. A professional organization is one that holds conferences and/or produces a periodic journal. This is not the same thing as an internship, job, or student organization; it is a professional *membership*.
2. Portfolio: Students may turn in a neat and organized 3-ring binder (portfolio) at the end of the semester containing all work completed in the class. Copies of group assignments are acceptable. This should be professional quality (for example, you would bring it to an interview to display your work).
3. Tour a crime lab and write a 2-page, typed, double-spaced synopsis of the experience. Santa Clara has monthly tours, and San Mateo has an annual tour in October.

Class Protocol and Policies

- Late work may be submitted with a penalty of 5% per day for a maximum of 5 days, weekends included. Assignments submitted thereafter will NOT be accepted and results in an automatic fail unless extraordinary, documented circumstances exist or a doctor's note is presented. Avoid missing lab practicals as there are no make-up sessions available. Should you know in advance of any extenuating circumstances that conflict with such sessions, it is your responsibility to inform me well in advance. The possibility for submitting an alternative assignment may be granted at discretion, but be advised that this undertaking will be quite demanding. If you are in any doubt about the requirements of an assignment, or due dates/times, please re-read the directions of the assignment and/or schedule. If your question is still unanswered, contact me for clarification.
- Attendance and class participation is expected. It is essential that you come to class prepared so keep up with the reading, complete assignments on time, and participate in class discussions. Lack of adequate participation *will* result in pop quizzes, which *will* count toward your final grade.

- Cell phone use is NOT PERMITTED during class. Students caught using their phone will be asked to surrender it for the remainder of the class. Laptops are permitted for note-taking only.
- Handle personal business before you begin an exam. A student who leaves the classroom *for any reason* during an exam will be presumed finished with the exam.

Student Resources

Forensic Science Student Group (FSS)

Forensic Science Students is a campus group open to all students interested in forensic science. The group meets biweekly during the semester and offers friendship, forensic science-related activities, networking opportunities, and mentorship. Members of the FSS participate and assist at conferences, CSI camps, guest speaking events, and other extra-curricular activities. FSS Peer Mentors assist forensic science students in navigating the major, understanding requirements and prerequisites, and making wise choices in their college careers. Mentors may also offer limited tutoring, and facilitate educational and professional opportunities. Contact sjsu.fss@gmail.com for more information, or to get an application for membership.

Student Technology Resources

Computer labs for student use are available in the Academic Success Center located on the 1st floor of Clark Hall and on the 2nd floor of the Student Union. Additional computer labs may be available in your department/college. Computers are also available in the Martin Luther King Library. A wide variety of audio-visual equipment is available for student checkout from Media Services located in IRC 112. These items include digital and VHS camcorders, VHS and Beta video players, 16 mm, slide, overhead, DVD, CD, and audiotape players, sound systems, wireless microphones, projection screens and monitors.

Learning Assistance Resource Center

The Learning Assistance Resource Center (LARC) located in Room 600 in the Student Services Center assists students in the development of their full academic potential and motivates them to become self-directed learners. The center provides support services, such as skill assessment, individual or group tutorials, subject advising, learning assistance, summer academic preparation and basic skills development. <http://www.sjsu.edu/larc/>

SJSU Writing Center

The SJSU Writing Center located in Room 126 in Clark Hall offers a variety of resources to help students become better writers, including one-on-one tutoring sessions and numerous writing workshops. All services are free for SJSU students. <http://www.sjsu.edu/writingcenter/>

CASA Student Success Center

The Student Success Center in the College of Applied Sciences and Arts (CASA) provides advising for undergraduate students majoring or wanting to major in programs offered in CASA Departments and Schools. All CASA students and students who would like to be in CASA are invited to stop by the Center for general education advising, help with changing majors, academic policy related questions, meeting with peer advisors, and/or attending various regularly scheduled presentations and workshops. If you are looking for academic advice or even tips about how to navigate your way around SJSU, check out the CASA Student Success Center. Location: MacQuarrie Hall (MQH) 533. Contact information: [408.924.2910](tel:408.924.2910) Website: <http://www.sjsu.edu/casa/ssc/>. The CASA Student Success Center also provides study space and laptops for checkout.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>

Important Dates This Semester

<http://www.sjsu.edu/registrar/calendar/2174/index.html>

Sep 6: Last Day to Drop Without a W

Sep 13: Last Day to Add a Course, Last Day to Request CR/NC

Nov 16: Last Day to Submit Late Drop/Withdrawal Request <http://www.sjsu.edu/aars/forms/>

Dec 7: Last day of Instruction

Justice Studies Reading and Writing Philosophy

The Department of Justice Studies is committed to scholarly excellence. Therefore, the Department promotes academic, critical, and creative engagement with language (i.e., reading and writing) throughout its curriculum. A sustained and intensive exploration of language prepares students to think critically and to act meaningfully in interrelated areas of their lives—personal, professional, economic, social, political, ethical, and cultural. Graduates of the Department of Justice Studies leave San José State University prepared to enter a range of careers and for advanced study in a variety of fields; they are prepared to more effectively identify and ameliorate injustice in their personal, professional and civic lives. Indeed, the impact of literacy is evident not only within the span of a specific course, semester, or academic program but also over the span of a lifetime.

Instructor

Dr. Shawna Bolton first attended the University of Toronto where she obtained her BA in Anthropology (major) and double minored in French and English. She then went on to complete an MSc in Criminal Justice with an advanced forensic anthropology interdiscipline at Radford

University before earning her PhD in Forensic Sciences at the University of Wolverhampton in the UK. There, Dr. Bolton conducted preliminary research investigating the post mortem molecular properties of cartilage and its potential use as a forensic tool. Upon the completion of her doctorate, she has worked in partnership with Global Forensics and the University of Wolverhampton to prepare and provide academic and laboratory training to Rwandan National Police officers enrolled in an intensive forensic DNA and toxicology module. To date, she is teaching FS and JS courses while continuing her research into cartilage degradation.

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Tentative Course Schedule

Important Dates - *The schedule is subject to change with fair notice.*

Week	Date	Discussion Topic (s)		Chapter Number
1	08/24	Away		1
2	08/29 & 08/31	<i>Justice and Science / Introduction to Forensic Science and History</i> Handouts, Syllabus, Overview of Course		1
3	09/05 & 09/07	<i>Role of Forensic Science at the Crime Scene & Physical Evidence (Origins, Types & Admissibility)</i>	Crime scene processing exercise / <u><i>JBR - Case Review</i></u>	2, 3
4	09/12 & 09/14			
5	09/19 &	<i>Forensic Biology I: Detection and Identification of Biological Material</i>		4, 8

	09/21			
6	09/26 & 09/28	<i>Forensic Bio I (continued): Bloodstain Pattern Interpretation</i>	<u>LAB 1: Screening Bloodstain Evidence</u>	4,8
7	10/03 & 10/05	<i>Forensic Biology II: Forensic DNA Analysis and CODIS</i>		9
8	10/10 & 10/12	<i>The Forensic Examination of Trace Evidence: Hairs, Fibers, Paint, Glass and Soil</i>		16
9	10/17	<i>Science of Fingerprints: Development and Comparison</i>	<u>LAB 2: Fingerprint Processing</u>	13
10	10/19	<i>Mid-Term Exam</i>		1,2,3,4, 8,9,16
11	10/24 & 10/26	<i>Impression Evidence: Firearms and Tool Marks / Tread Impressions (Footwear/Tire)</i>		14, 15
12	10/31 & 11/02	<i>Impression Evidence: Firearms and Tool Marks / Tread Impressions...Continued</i>	<u>LAB 3: Comparative Analysis of Evidence</u>	14, 15
13	11/07 & 11/09	<i>Forensic Chemistry: Toxicology, Drug Analysis and Analysis of Fire Debris/Explosives</i>		10, 11, 12
14	11/14 & 11/16	<i>Forensic Entomology</i>		7
15	11/21 & 11/23	<i>Human Osteology/Forensic Anthropology</i>		6
16	11/28 & 11/30	<u>Lab 4: Processing Skeletal Remains</u>	No class on Thursday. Happy Thanksgiving!	6
17	12/05 & 12/07	<i>Topics in FS - Expert Witness Testimony/ Bias/ Laboratory Accreditation/ Error &Future of FS; Final Exam Review</i>		21
18	12/12 & 12/14	<i>Final – Cumulative Exam Part I: Theory</i>	<i>Final – Cumulative Exam Part II: Practical</i>	