

San José State University
CHHS/Department of Justice Studies
FS 163, Fingerprint Science, CRN 45802 & 45803, Fall 2019

Instructor	Mary Juno
Office Location	127 Health Building
Instructor Email	mary.juno@sjsu.edu
<u>Canvas Website</u>	https://sjsu.instructure.com/
Office Hours	1330-1500 T/Th, drop-in, or by arrangement
Class Days, Times, & Location	Tuesday 1500-1600 Thursday 1500-1730 in Health Building 207
Prerequisites	Upper division standing; JS 10 (JS major/minor); FS 11 (FS major/minor)
JS & FS Library Liaison	Nyle Monday nyle.Monday@sjsu.edu
<u>FS LibGuide</u>	http://libguides.sjsu.edu/c.php?g=230074&p=1526987

Course Description

History and use of fingerprints in criminal identification. Topics include the scientific basis for fingerprint identification, anatomy of friction ridge skin, recording legible fingerprints, latent print techniques, pattern classification, minutiae marking, the Henry System, AFIS and CAL-ID, and court presentation of fingerprint evidence.

Course Learning Objectives

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

- CLO1** Apply knowledge of sequential fingerprint development techniques for porous and non-porous surfaces.
- CLO2** Interpret fingerprint patterns correctly and classify them using the Henry system, National Crime Information Center system, and the Integrated Automated Fingerprint Identification System.
- CLO3** Articulate the underlying principles of identification from FRS and the scientific basis for fingerprint identification.
- CLO4** Create a fingerprint comparison exhibit suitable for court presentation, and articulate the ACE-V process and the underlying scientific principles of fingerprint identification.
- CLO5** Evaluate causes of error in fingerprint comparisons, including cognitive bias and subjectivity.

Required Materials

- 1) The Fingerprint Sourcebook (NIJ) ISBN: 1-978-4949-9919-3 Available in print or as a [pdf](#).
- 2) [Retractable Ridge Counter](#) and [Loupe](#)

Other Readings

Additional required readings, lab documents, and quizzes will be posted on Canvas. You will be required to download and print out some materials (worksheets and labs) and bring them to class.

Assignments

1. Practical Exercises (30%): Locating typelines and deltas, pattern identification, ridge counting and tracing, recording fingerprints on ten-print cards, systems of classification, ACE-V, matching partial prints, palm prints, latent print development, and case studies. Details of format and grading will be provided with each exercise. (LO1, LO2)
2. Exams and Quizzes (45%): Periodic quizzes on reading and lectures, one midterm and one final exam. (LO1 – LO5)
3. Presentation (25%): Each student will compare and identify sets of prints and create a professional court exhibit. Students will defend the identification in a mock court exercise. (LO3, LO4, LO5)

Grading Scale for All Assignments

A plus	97-100
A	94-96.9
A minus	90-93.9
B plus	87-89.9
B	84-86.9
B minus	80-83.9
C plus	77-79.9
C	74-76.9
C minus	70-73.9
D plus	67-69.9
D	64-66.9
D minus	60-63.9
F	<60

All assignments are graded based on adherence to directions, thoroughness, accuracy, neatness, effort, thoughtfulness, clarity, and logic.

Extra Credit

Extra credit opportunities may be available throughout the semester and will be used to augment the 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.
2. 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 Policies

- No cell phones in class: Turn them off and put them away. If you must use your phone during class time, please step outside of the classroom to do it.
- Laptop use is permitted in class for note-taking only.
- Plagiarized work will result in severe disciplinary action.
- Late work may be submitted for half credit within one week of due date.
- Make-ups for exams will generally not be possible unless extraordinary, documented circumstances exist.
- Lab exercises cannot be made up, so don't miss them.

- 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 Info and Resources

**See your major advisor for major advice. See a GE advisor for GE advice.
Follow your major's graduation roadmap.**

Consult the [Canvas Student Guide](#) for answers to common questions about Canvas.

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.

University Help Desk is the first point of contact for service and support to help you with password resets, login issues, email support and account requests. University Help Desk is located in Clark Hall, Room 102. Phone: 408.924.2377 Email: help@help.sjsu.edu Hours: Mon – Thur 8am - 9:45pm, Fri 8:00am – 4:45pm.

A.S. Computer Services Center has a computer lab with 100 computers that provided most major operating systems available from recently released versions of Microsoft Windows, to Linux, and Macintosh. Located in the Student Union on the 3rd floor. Phone: 408.924.6976 Hours: Mon - Thurs 8:00am – 10:00pm; Fri 9:00am - 5:00pm

CHHS Student Success Center

The Student Success Center in the College of Health and Human Sciences (CHHS) provides advising for undergraduate students majoring or wanting to major in programs offered in CHHS Departments and Schools. All CHHS students and students who would like to be in CHHS 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 CHHS Student Success Center. Locations: MacQuarrie Hall (MQH) 533 and bottom floor of the Health Building. Contact information: [408.924.2910](tel:408.924.2910) The CHHS Student Success Center also provides study space and laptops for checkout.

Learning Assistance Resource Center (LARC) is located in Room 600 in the Student Services Center and 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.

SJSU Writing Center is located in Room 126 in Clark Hall and 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.

Forensic Science Student Group (FSS) is a campus group open to all students interested in forensic science. The group meets biweekly during the fall and spring semesters 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.

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.

Important Dates This Semester:

Sept 3: Last Day to Drop Without a W

Sept 10: Last Day to Add a Course, Last Day to Request CR/NC

Nov 15: Last Day to Submit Late Drop/Withdrawal Request <http://www.sjsu.edu/aars/forms/>

Dec 9: Last day of Instruction

Instructor

Mary Juno earned her MSc in Forensic Science from the University of Strathclyde in Glasgow, Scotland, and her BA in Biological Anthropology from San Francisco State University. Juno worked for many years as a CSI at the Oakland Police Department where she processed hundreds of major crime scenes. She currently co-coordinates the FS program, teaches JS and FS courses, and advises FS majors and minors. Her office is 127 Health Building.

FS 163 Fingerprint Science Fall 2019 Course Schedule (subject to change)

Week	Date	Class Topics	Readings and Assignments
1	8/22	Introduction, Course Overview, History of FP, FRS Structure and Formation Fingerprint Pattern Overview	Take NIST Quiz, get loupe & ridge counter Read FP Sourcebook Ch 1, 2 & 3 Read Capturing Legible FP
2	8/27 8/29	NIST Quiz due Lab: Ten Prints & Major Case Prints	Read FP Sourcebook Ch 4
3	9/3 9/5	Bring Loupe and Ridge Counter to Class Loops	Read FSS Fingerprints Print out docs from Canvas
4	9/10 9/12	Whorls Arches	Read FP Sourcebook Ch 5 Complete Worksheets
5	9/17 9/19	Pattern Quiz Henry Classification	Read Handouts on Canvas Complete Worksheets
6	9/24 9/26	Henry, NCIC, IAFIS Classification Quiz	Read FP Sourcebook Ch 9 & 14 Read Article: Scientific Methodology and the Friction Ridge Identification Process FP
7	10/1 10/3	Individualization, Scientific Basis for FP Examination, Levels of Detail, ACE-V Ridgeology	Complete Worksheets Study for Midterm
8	10/8 10/10	Continuation of above No class Thursday 10/10 Take Midterm Exam on Canvas	Read FP Sourcebook Ch 7, 10 & 11 FBI Latent Print Guide
9	10/15 10/17	Latent Prints & Evaluation Lab Developing Latent Prints: Physical Methods & Evaluation	
10	10/22 10/24	Lab: Developing Latent Prints: Chemical Methods & Evaluation	Read FP Sourcebook Ch 12, FBI Mayfield Case, Confirmation Bias
11	10/29 10/31	Latent Print Quiz Error: Subjectivity and Cognitive Bias Human Factors, Mayfield Case	Read FP Sourcebook Ch 13 & 15
12	11/5 11/7	Reading Quiz Courtroom Presentation of FP Evidence, Expert Testimony, Defense Challenges	Read Defense Challenge to Fingerprints
13	11/12 11/14	Identification Exercises Mock Court	Prep Court Exhibit & Witness Questions
14	11/19 11/21	Mock Court Mock Court	Read FP Sourcebook Ch 6
15	11/26 11/28	Palms and Feet, Lab No Class Meeting: Thanksgiving	Study!
16	12/3 12/5	Final Exam Review In-class Final	
	TBD	Canvas Final Exam	