

**San José State University**  
**CASA/Department of Justice Studies**  
**FS 163, Fingerprint Science, CRN 48725, Fall 2015**

<b>Instructor</b>	Mary Juno
<b>Office Location</b>	MacQuarrie Hall 511
<b>Instructor Email</b>	<a href="mailto:mary.juno@sjsu.edu">mary.juno@sjsu.edu</a>
<b>Canvas Website</b>	<a href="https://sjsu.instructure.com/">https://sjsu.instructure.com/</a> Login with SJSU Tower ID and Password → Courses → FS 163
<b>Office Hours</b>	Drop in: Thurs 0900-1200, Fri 0900-1000
<b>Class Days, Times, &amp; Locations</b>	Thurs 1330-1515 MH 523 Fri 1300-1500 MH 523
<b>Prerequisites</b>	FS 11, JS OR FS MAJOR/MINOR, UPPER DIVISION STANDING. JS MAJORS MAY SUBSTITUTE JS 10 FOR FS 11.
<b>Library Subject Liaison</b>	Silke Higgins <a href="mailto:silke.higgins@sjsu.edu">silke.higgins@sjsu.edu</a>
<b>FS LibGuide</b>	<a href="http://libguides.sjsu.edu/content.php?pid=57768&amp;sid=2450175">http://libguides.sjsu.edu/content.php?pid=57768&amp;sid=2450175</a>

### Course Description

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

### Course Goals and Student Learning Objectives

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

- LO1** Demonstrate knowledge of structure, formation and function of FRS.
- LO2** Identify fingerprint patterns, minutiae points, and microscopic ridge characteristics (three levels of detail).
- LO3** Articulate the underlying principles of identification from FRS and the scientific basis for fingerprint identification.
- LO4** Articulate and demonstrate the process of ACE-V through fingerprint comparison, and create an exhibit of the comparison for court presentation. Demonstrate understanding of the bases of court challenges to fingerprint evidence.
- LO5** Classify fingerprints correctly using the Henry, NCIC and IAFIS systems.
- LO6** Demonstrate understanding of error, human factors, confirmation and cognitive bias, subjectivity, and the scientific method as related to fingerprint identification.
- LO7** Demonstrate knowledge of latent fingerprint development techniques.

### Required Materials

- 1) The Fingerprint Sourcebook (NIJ) ISBN: 1-978-4949-9919-3  
[http://www.alibris.com/search/books/isbn/9781494999193?utm\\_term=135241572009product\\_type\\_11books%26product\\_type\\_12non-fiction%26custom0%26product\\_type\\_13law&utm\\_campaign=none&adpos=1o1&creative=81346968969&device=c&matchtype=&network=g&gclid=CMjG0Kba5cYCFRSIfgodPucNUQ](http://www.alibris.com/search/books/isbn/9781494999193?utm_term=135241572009product_type_11books%26product_type_12non-fiction%26custom0%26product_type_13law&utm_campaign=none&adpos=1o1&creative=81346968969&device=c&matchtype=&network=g&gclid=CMjG0Kba5cYCFRSIfgodPucNUQ)
- 2) Retractable Ridge Counter: <https://www.shopevident.com/category/magnifiers/ridge-counters>
- 3) Loupe: [http://www.amazon.com/Carson-LumiLoupe-Power-Magnifier-LL-10/dp/B000CAHCQS/ref=sr\\_1\\_6?ie=UTF8&qid=1437257287&sr=8-6&keywords=loupe](http://www.amazon.com/Carson-LumiLoupe-Power-Magnifier-LL-10/dp/B000CAHCQS/ref=sr_1_6?ie=UTF8&qid=1437257287&sr=8-6&keywords=loupe)

## Other Readings

Links to additional required readings will be posted on Canvas.

## Assignments

1. Practical Exercises (40%): Locating typelines and deltas, pattern identification, ridge counting and tracing, recording fingerprints on ten-print cards, Henry classification, ACE-V, matching partial prints, palm prints, and latent print development. Details of format and grading will be provided with each exercise. (LO2, LO4, LO5, LO7)
2. Exams and Quizzes (30%): Periodic quizzes on reading and lectures, one midterm and one final exam. (LO1 - LO7)
3. Presentation (20%): Each student will compare and identify two prints and create a professional court exhibit. Students will defend the identification in a mock court exercise. (LO4, LO6)
4. Participation and homework (10%): Maintain lab notebook according to lab rules. Complete worksheets and come to class prepared to discuss and critique readings and assignments. Participate in all in-class and out-of-class assignments. Complete homework on time. (LO1-LO6)

## Grading Scale for All Assignments

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

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

## 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. Note: 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. Tour a crime lab and write a 2-page, double-spaced synopsis of the experience. SCCCL and SMCCCL are good options.
3. Attend a relevant conference or seminar and write a 2-page, double-spaced synopsis of the experience.

## Late Work and Make Ups

Late work will generally not be accepted, or may be given half credit in some instances. Make-ups will generally not be possible unless extraordinary, documented circumstances exist. 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.

## **Classroom Protocol**

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 and laptop use is not permitted during class. Students who use their phone in class will be asked to surrender it for the remainder of the class period, or leave for the day.

## **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](mailto: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 1<sup>st</sup> floor of Clark Hall and on the 2<sup>nd</sup> 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 located in MacQuarrie Hall, Room 533 (top floor) provides GE advising for undergraduate students majoring or interested in majoring in programs offered by CASA Departments and Schools. The Student Success Center provides also assistance with changing majors, answers to academic policy related questions, meetings with peer advisors and/or various regularly scheduled presentations and workshops. <http://www.sjsu.edu/casa/ssc/>

## University Policies

### Academic Integrity

Academic integrity is essential to the mission of San José State University. Students are expected to perform their own work (except when collaboration is expressly permitted by the course instructor) without the use of any outside resources. Students are not permitted to use old tests, quizzes when preparing for exams, nor may they consult with students who have already taken the exam. When practiced, academic integrity ensures that all students are fairly graded. Violations to the Academic Integrity Policy undermine the educational process and demonstrate a lack of respect for oneself, one's fellow students and the course instructor. Violations also can ruin the university's reputation and devalue of the degrees it offers. We all share the obligation to maintain an environment that practices academic integrity.

The University's Academic Integrity Policy is available at [http://www.sa.sjsu.edu/download/judicial\\_affairs/Academic\\_Integrity\\_Policy\\_S07-2.pdf](http://www.sa.sjsu.edu/download/judicial_affairs/Academic_Integrity_Policy_S07-2.pdf). Your own commitment to learning, as evidenced by your enrollment at San Jose State University, requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The website for Student Conduct and Ethical Development is [http://www.sa.sjsu.edu/judicial\\_affairs/index.html](http://www.sa.sjsu.edu/judicial_affairs/index.html).

Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a failing grade in the course and will be subject to sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include in your assignment any material you have submitted, or plan to submit for another class, please note that SJSU's Academic Policy F06-1 requires approval of instructors.

### Credit Hour Policy

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of forty- five hours over the length of the course (normally 3 hours per unit per week with 1 of the hours used for lecture) for instruction or preparation/studying or course related activities including but not limited to internships, labs, clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.

### Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drops, academic renewal, etc. Information on add/drops is available at <http://info.sjsu.edu/web-dbggen/narr/soc-fall/rec-298.html>. Information on late drops is available at <http://www.sjsu.edu/sac/advising/latedrops/policy/>. Students should be aware of the current deadlines and penalties for adding and dropping classes.

### Important Dates This Semester

<http://www.sjsu.edu/registrar/calendar/2154/>

Sept 1: Last Day to Drop Without a W

Sept 9: Last Day to Add a Course, Last Day to Request CR/NC

Nov 13: Last Day to Submit Late Drop/Withdrawal Request

Dec 4: Last day of Instruction (for this class)

## **Campus Policy in Compliance with the American Disabilities Act**

The Accessible Education Center (. <http://www.aec.sjsu.edu/>) provides resources for students with disabilities. Resources include: Academic Accommodation, Academic Advising, Adaptive Technology Center, Alternative Media Center, Deaf & Hard of Hearing Program, Disabled Parking, Guidelines for Documentation of Disability, Educational Assistants, Learning Disabilities, and Priority Registration. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with the AEC to establish a record of their disability. If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please see me during office hours.

AEC: Administration Building 110

Phone: 408.924.6000 (Main Office) 408.924.6542 (Deaf and HoH) 408.808.2123 (ATC)

Hours: Mon - Thurs, 9:00am to 6:00pm; Friday 10:00 am to 4:00 pm

## **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**

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 and taught in the Oakland Police Academy. She has conducted research at the NYPD Latent Fingerprint Lab, and currently teaches JS and FS courses, and advises FS majors and minors. Her office is 511 MacQuarrie Hall.



## FS 163 Fingerprint Science Fall 2015 Course Schedule

Schedule is subject to change.

Week	Date	Topics and Deadlines	Readings and Assignments for Following Class
1	8/20 8/21	Introduction, Course Overview, Lab Notebook, History of FP, FRS Structure and Formation	FP Sourcebook Ch 1 & 4 <a href="#">FSS: Fingerprints</a> <a href="#">Capturing Legible FP</a>
2	8/27 8/28	Lab: 10 Print Cards Fingerprint Pattern Overview Reading Quiz Ch 1-4	FP Sourcebook Ch 2 & 3
3	9/3 9/4	Patterns Lab: Pattern Worksheets, Ridge Counts	
4	9/10 9/11	Patterns Lab: Pattern Worksheets, Ridge Values Quiz: Patterns, Ridge Tracing, Counts	FP Sourcebook Ch 5 & 6
5	9/17 9/18	Systems of Classification: Henry, NCIC, IAFIS Lab: Classification	
6	9/24 9/25	Classification Continued Lab: Classification Quiz : Classification	FP Sourcebook Ch 7, 10 & 11 FBI Latent Print Guide
7	10/1 10/2	Developing Latent Prints: Powders Development and Evaluation Lab: Latent Prints	
8	10/8 10/9	Developing Latent Prints: Ninhydrin, Cyanoacrylate, ALS Lab: Latent Prints	
9	10/15 10/16	Complete Labs, Review for Exam Midterm Exam	FP Sourcebook Ch 9 & 14 Article: Scientific Methodology and the Friction Ridge Identification Process
10	10/22 10/23	Scientific Basis for FP Examination, Levels of Detail, Examination Process: ACE-V Lab: ACE-V, Matching Prints and Partial	FP Sourcebook Ch 12 FBI: Mayfield Case Article: Confirmation Bias Article: Subjectivity: The Misused Word
11	10/29 10/30	Error: Subjectivity and Cognitive Bias Human Factors, Mayfield Case Lab: Continued	FP Sourcebook FP Sourcebook Ch 13 & 15 Locate: Codes of Ethics for Latent Print Examiners
12	11/5 11/6	Courtroom Presentation of FP Evidence, Expert Testimony, Defense Challenges	Article: Defense Challenge to Fingerprints Prep Court Exhibit, Questions for Witnesses
13	11/12 11/13	Reading Quiz Mock Court	
14	11/19 11/20	Mock Court	
15	11/26 11/27	Palms and Feet Lab: Palms and Feet	FP Sourcebook Ch 6
16	12/3 12/4	Livescan, AFIS, IAFIS, APIS, Lights Out Last Day of Class - Review	

<b>Week</b>	<b>Date</b>	<b>Topics and Deadlines</b>	<b>Readings and Assignments for Following Class</b>
17	TBD	Final Exam	