

Instructor: Dr. Mark Barash

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Office Hours: Mon 11am-12pm; Wed 4pm-6pm; Thr 3pm-6pm; Online only (Zoom):

https://sjsu.zoom.us/j/6339297996 (no need to book, just drop-in)

Class Days/Time: Wednesday 12:30pm-3:00pm Online (via Zoom): https://sjsu.zoom.us/j/87291193116

Canvas Course: https://sjsu.instructure.com/courses/1430432

Prerequisites: Senior standing in a final semester; Justice Studies or Forensic Science major; JS 100W and JS

114 with a "C or better"; Department consent.

FS Library Liaison: Nyle Monday: Nyle.Monday@sjsu.edu

FS Lib Guide: http://libguides.sjsu.edu/content.php?pid=57768&sid=2450175

FS Program Website: http://www.sjsu.edu/justicestudies/degrees/fs-program/

If you need course adaptations or accommodations because of a disability, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with AEC to establish a record of their disability.

Course Description

This senior seminar course provides an in-depth study of a number of selected issues in forensic science through their analysis and discussion. In particular, students will focus on identifying issues presented in various journal publications, formulate sound arguments using their critical thinking skills, and articulate their conceptualizations of subject matters through group-lead discussions, research papers and digital media project on a relevant topic. Topics to be explored include: understanding capabilities and limitations of forensic science, identifying the sources of potential error and its consequences in the criminal justice context, application of the emerging forensic technologies and associated ethical and legislative considerations, principles and concepts relating to quality in forensic science and other. Topics covering development of professional skills, such as writing resumes and CV, networking, job search and preparing for an interview will be also discussed.

Note the following prerequisites:

- Justice Studies Majors: JS 100W and JS 114 or instructor consent,
- Forensic Science Majors: JS 100W, FS 161, FS 162, Biology 30, CHEM 1A and CHEM 1B
- **Both majors**: senior standing or by instructor consent, graduation application submitted and major form filled out and signed.



Course Goals and Student Learning Objectives (CLO)

The overarching goal of this course is to encourage students to develop a self-directed and proactive learning attitude and essentially transform the empirical knowledge they acquire, into professional expertise and autonomy. These qualities would help students becoming more confident and independent individuals, which would positively impact their career and life in general.

Course Learning Objectives (CLO)

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

- CLO1 Undertake a critical analysis of contemporary problems relevant to forensic science.
- CLO2 Integrate cumulating knowledge for completion of a formal research paper that (a) synthesizes relevant scholarly sources; (b) addresses relevant forensic science topic; (c) reflects professional formatting and writing standards.
- CLO3 Apply scientific (and otherwise rational) forms of reasoning, argumentation, research, and support in forming any particular worldview or position in the pursuit of 'justice' and addressing social problems in our communities/societies.
- **CLO4** Prepare for a professional career in forensic science by creating a clear and appealing resume, developing communication skills and identifying resources for job search and professional development.

Course Format

This senior seminar is designed with the structure, rigor, and spirit of a graduate level course. In a seminar, students meet regularly to report and discuss an area of research under the guidance of a course coordinator. The coordinator's role in this course is to guide your conversations, steer your thinking in intellectually sound directions, and to evaluate your work. The students should approach this course with the mentality of self-starters who know how to manage their time effectively and have the motivation of educating themselves independently. Since participation is a key element in this class, I would advise not taking this course if you anticipate missing classes.

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for preparation, studying, completing assignments and other course related activities. More details about student workload can be found in <u>University Policy S16-9</u>.

The mode of instruction for this course is online only. Hence, reliable access to a computer and the internet will be required. Copies of course materials will be posted on Canvas, while some course materials may need to be accessed via internet links. You are responsible for regularly checking your e-mail and Canvas regarding announcements, reminders, and any additional course materials.



Zoom Classroom Etiquette

I strongly encourage you to turn on your camera during the class. This would create a more pleasant learning environment, which would be beneficial to all. However, if you choose not to, I completely understand that privacy of your home life and access to a room for privacy should not be a barrier to your success in this class. Nevertheless, class discussions are an essential part of this course and you are required to participate in these discussions. Feel free to contact me if you have questions or concerns regarding this matter.

This course or portions of this course (i.e., lectures, discussions, student presentations) might be recorded for instructional or educational purposes by the instructor. The recordings will only be shared with students enrolled in the class through Canvas. If, however, you would prefer to remain anonymous during these recordings, then please speak with the instructor about possible accommodations (e.g., temporarily turning off identifying information from the Zoom session, including student name and picture, prior to recording).

Please be advised that students are prohibited from recording class activities (including class lectures, office hours, advising sessions, etc.), distributing class recordings, or posting class recordings. Materials created by the instructor for the course (syllabi, lectures and lecture notes, presentations, etc.) are copyrighted by the instructor. This university policy (S12-7) is in place to protect the privacy of students in the course, as well as to maintain academic integrity through reducing the instances of cheating. Students who record, distribute, or post these materials will be referred to the Student Conduct and Ethical Development office. Unauthorized recording may violate university and state law. It is the responsibility of students that require special accommodations or assistive technology due to a disability to notify the instructor.

Course Requirements and Assignments

Required Texts

- There is no dedicated textbook for this course.
- There are however other <u>multiple resources required</u> for this course, such as peer-reviewed papers, media articles and web sites. Links to required resources will be posted in Canvas. <u>Check the site frequently.</u>

Classroom Protocol

- Students are expected to: attend all class meetings, arrive on time, stay for the duration of the class period, complete all readings and assignments in accordance with the dates on the course schedule.
- Students are responsible for all missed notes, materials and announcements due to absence. You are encouraged
 to exchange contact information with your classmates and use the Canvas resources to collaborate and keep in
 touch.
- Due to the nature of the class and time limitations, no late submissions/resubmissions for the in-class presentation would be possible.



Assignments addressing respective learning objectives

The course requirements consist of six assessment tasks:

- 1. Deliver one oral and one poster presentation during the course (15% each; 30% total): CLO 1, 2, 4 & 5.
- 2. Discussion leadership (5%): CLO 1, 2, 5&6.
- 3. Participation in weekly discussions (15%): CLO 1, 2, 5&6.
- 4. Write a final research paper (20%): CLO 1-3 & 5.
- 5. Digital media project and its presentation (25%): CLO 1-5.
- 6. Create a resume and cover letter. Identify jobsites and resources for networking (5%): CLO 1 & 6.

Total: 100%

Note: There is no final exam for this course. The digital media project is considered the final assignment for this course (as detailed below).

Detailed information about assignments and grading rubrics

Assessment tasks 1-3: Oral and Poster Presentations (weight: 15% x2); Discussion lead (5%) and Participation in weekly discussions (15%).

These are <u>individual</u> assignments. Each student will be responsible for offering <u>two</u> in-class <u>presentations</u> based on weekly topics (Assessment task 1): one oral and one poster, both delivered in a digital form (e.g. a PowerPoint presentation). Students are to conduct research on a topic assigned on that day and present their findings to the class. Students must discuss with the class: (1) the thesis of the chosen topic, (2) background information on the chosen topic based on the reading materials; (3) additional/outside research directly related to the thesis/main argument/theme, (4) ethical concerns, and (5) prepare up to 3 discussion questions. You must discover the main argument/thesis/theme of the assigned research topic and make a strong connection to what you will be presenting in class.

The presentation should be relatively short (between 10-15 minutes), but comprehensive and must include the following sections:

- 1. Introduction: description of a specific topic assigned by the instructor, its importance and the primary thesis.
- 2. Literature review: concise and balanced coverage of the discussed topic, based on the relevant literature. This is the main part of your presentation, providing an objective discussion of various opinions on the disputed topic, in terms of various pros and cons of the current approach, implications of their effectiveness/ineffectiveness, and suggestions about alternative solutions (if any).
- 3. Conclusions. Summarize the topic and provide your critique on the discussed matter. The critique should pull upon findings in the literature to support the presenter's point of view.
- 4. References. At least three sources, including one peer-reviewed publication.

Following each presentation, students who have been assigned '<u>Discussion Leaders</u>' should be prepared to pose questions to the class (5 questions will suffice) to facilitate class discussion (**Assessment task 2**). The questions supposed to underscore critical themes or issues associated with the assigned readings and intended to facilitate the discussion for the day. While the instructor will help to moderate discourse, students are largely responsible for engaging in inquiry and discussion.



Grading criteria

The presentations will be graded based on the level of competency and flow, knowledge of the subject, ability to engage the audience and conclusions. It is highly recommended that students practice their presentations several times (preferably in front of someone who will provide constructive and objective feedback). The presenters will be required to submit their Power Point (*.ppt) file prior to in-class presentation.

Each presentation will receive a grade ranging from 0-12.5 points based on the fulfilment of the above requirements. Please note that make-up presentations will not be allowed, except under extreme circumstances, which can be substantiated (documentation will be required).

The discussion leaders will receive a grade ranging from 0-5 points, based on their ability to facilitate the discussion and engage the students (Assessment task 2). The students will receive a grade ranging from 0-10 points, based on their pro-active participation in discussion (Assessment task 3).

Presentation tips

Here is some advice to help you with the preparation of your presentation:

- Put a title at the top of each slide that states the slide's main point.
- Use large, easy-to-read font (e.g., Arial) throughout; 18 point minimum, 24 point recommended, 36 point or larger for a title
- Don't use too much text. Bullet points are generally better than full sentences or paragraphs. Include more illustrations rather than dry text. Try to avoid reading the slide to the audience.
- Don't forget to include references, either as a footnote on each slide or on the final slide.
- Use primary colors for the font and background when possible. Don't use colors which are hard to read (e.g. too bright/dark).
- Speak loudly and clearly. Face forward as much as possible. Try not to rush.
- Practice what you will say about each slide so that you present the essential points as clearly and efficiently as possible. Practice your presentation with a timer to make sure that you are under 15 minutes.

Assessment task 4: Critical literature review (weight: 20%)

This is an <u>individual task</u>. The students will be required to write a 10-15 page paper of 3,000 to 4,000 words (not including the cover page, Abstract and References) analyzing a forensic science – related topic/controversy (to be provided in Canvas). The paper should be written in a 12-point font (e.g. Times New Roman, Arial, etc.), with 1.5-point space lines in a paragraph. The papers should be submitted in .docx/.doc/.pdf format via Canvas following Turnitin check at their respective due dates (to be announced online).

In their paper, students should include the following sections:

- 1) Title
- 2) Abstract
- 3) Introduction describing paper's topic and its relevance.
- 4) Review of the relevant literature on the topic under discussion (minimum of five **recent** scholarly sources, **including at least 3 peer-reviewed**), providing different opinions, especially if the topic is considered controversial.
- 5) Summary of findings and suggestions for alternative solutions.
- 6) Accurate citation of all the references used, according to either CSE or APA formatting requirements.



Assistance with CSE formatting style and APA can be found at:

https://writing.wisc.edu/handbook/documentation/doccse/nameyear/ and

http://owl.english.purdue.edu/owl/resource/560/01/ respectively.

Using an automatic citation software (e.g. <u>Endnote</u>, <u>Refworks</u>, <u>Mendeley</u> etc.) is strongly encouraged. Refworks license is free to all SJSU students, while Mendeley (and other similar software) is distributed freely. Links to relevant citation resources will be available on Canvas. A special 'academic writing workshop' session will be provided to you during the course.

Students can choose a topic based on their own research interests or from a proposed list. No paper however will be accepted without previous communication and approval by the instructor. The purpose of the paper is not only to test your knowledge on a specific topic, but more so to facilitate critical and independent thinking.

Students are prohibited from writing on a topic that has been used for previous courses, or currently being used for another course. Any attempt to violate this requirement will constitute a violation of the Academic Integrity policy and result in an automatic "F" for the paper, which ultimately will result in failing the course.

Grading Criteria:

In order to demonstrate comprehension of the course material, one must be able to write in a clear and effective manner. Always carefully proofread your assignments before submitting them.

Students will be graded on their ability to synthesize course materials and provide a critical analysis of the course content. Specifically, written assignments will be graded primarily on the scientific content and relevance (70%), clear and correct annotation (15%), professional layout and formatting (10%), correct grammar and style (5%)

Due date: submission dates for this assignment will be announced during the semester. Late submissions **will not be accepted** unless a valid, documented, and verifiable reason is provided.

Assessment task 5: Digital media project (weight: 25%)

<u>This is a group task.</u> This assessment task is about understanding various scientific concepts covered in this course, summarizing the material in a clear and succinct way and efficient communication of a forensic science topic.

Students will be required to allocate a topic from a list provided by the instructor or propose their own topic of interest related to a forensic science controversy/dilemma. The students will conduct a comprehensive research on the proposed topic by reviewing the recent literature sources. The outcome of the research will be presented in the form of a digital media such as short video clip, animation, podcast or a blended-media artefact, according to the basic digital media principles discussed in the class. The length of the media file should be between 3 to 5 minutes. The file should be uploaded to one of the free online platforms, such as Youtube or Vimeo and a link as well as the original file submitted through Canvas prior to its presentation in class.

Digital media training will be provided to you with a lecture on digital media principles covering layout design, color theory, fonts, use of images and basic video techniques. Additional online resources will be available to help with the digital media creation.

You will need to contact your classmates and create a team of 3-4 students. Each team will have its own Canvasintegrated homepage where the team members can collaborate on their project (more details to be discussed in class). The digital media project will benefit you in various ways such as studying the course content in a non-trivial and engaging form, learning valuable software tools and incorporating digital media principles for more effective



learning, communication and engagement, as well as encouraging creativity. The digital media project is an authentic task that resembles real life scenarios, which you will likely experience in your professional career such as communicating scientific findings to a jury or a police investigator.

This project is not about using expensive equipment or sophisticated technology. It is about learning to tell a story in a clear, succinct and visually appealing manner, using digital media principles to ensure the message will be conveyed efficiently. The digital "props" are not to be ignored of course, as they could be very helpful to deliver your ideas. Nonetheless, your media project will be primarily judged on its content and how well you communicate it to the audience, and less on how "fancy" or "sophisticated" your animations are.

Remember, this is a group task that requires proactive engagement and effective teamwork. At the end of your project, each student will have to provide a brief feedback on group's dynamics including assessment of each member contribution. Your peers' feedback will be incorporated in the final grade (e.g. a team member who hasn't contributed to the task may receive an appropriate mark for this assignment, such as 0).

Due date: This task will be due on the last two classes of the course, with potential adjustments based on students' progress. Further details will be announced on Canvas.

Grading criteria

You will be assessed on the scientific content of your presentation and application of the digital media principles. The presentations will be primarily graded based on the level of competency in the subject presented, ability to engage the audience and your critical review of the topic. Detailed feedback will be provided in the form of marks and comments. Assessment criteria include:

- Disciplinary knowledge (35%)
 - Accuracy and completeness of information
 - o Comprehensive research using available resources (textbooks, peer-reviewed papers)
- Professional skills (35%)
 - o Understanding and explanation of underlying scientific principles of the topic
- Communication skills (15%)
 - o Presentation of information (proper usage of professional language, lack of grammatical mistakes, well-structured and easy-to-comprehend presentation)
 - Use of digital media principles such as layout design, fonts, color, graphics and video principles to enhance communication of the topic
- Enquiry and innovation (15%)
 - o Creativity (how presentation approach enhances topic)
 - o Presentation uses efficient ways to engage the audience

Overall assessment of this task will be performed jointly by students (20% of the total mark) and course coordinator (80% of the total mark), accounting together for 25% of the final course grade.

Assessment task 6: Creating a resume and a cover letter (weight: 5%)

The students will be required to create a resume and a cover letter as an essential step in their professional career. They will also need to identify relevant jobsites, professional membership organizations and resources for networking. More details will be provided in class.



Extra Credit Opportunities

Extra credit opportunities may be available throughout the semester and may be used to <u>cumulatively</u> augment your final grade up to 5% <u>total</u>. These opportunities will also be announced on Canvas and required documentation would need to be uploaded and/or submitted online. Some of such activities are listed below:

- Complete a short professional development course in forensic science (in any forensic discipline) offered by the
 National Institute of Justice marked "extra credit" in the Forensic Science module and submit your certificate of
 completion by the due date. Successful completion of this assessment task will add 1% to the final grade.
- 2. Students can write a research paper about their future career that is of interest to the student. The paper should be in either in CSE or APA format and contain an introduction, a body of research, and a conclusion. The length of a paper should be between 2 and 3 standard pages in 1.5 font. The paper must contain in-text citations from at least three sources (preferably peer-reviewed papers). Successful completion of this assessment task will add 1% to the final grade.
- 3. Read and critique a current journal article (within the last 2 years) from any forensic science discipline. Discuss its relevance to forensic science and how it contributes to the advancement in the field. The paper will be in either CSE or APA format and contain an introduction, the body of research, and a conclusion. The length of a paper should be between 3 and 4 standard pages in 1.5 font. The paper must contain in-text citations from at least three peer-reviewed sources. Successful completion of this assessment task will add 2% to the final grade.
- 4. Additional extra credit opportunities will be announced in class and/or on Canvas.

Please note, the maximum cumulative bonus grade you can get is 5 points (if you complete all three extra-credit assignments).

Late Work and Make Ups

Please manage your time responsibly with the knowledge that late work will generally not be accepted. If you know ahead of time that you will be offline when an assignment is due, complete it early. Make-ups will generally not be given unless extraordinary, documented circumstances exist.

If you have a genuine problem, please contact me at the earliest convenience and I will gladly do my best to help you. If you are in any doubt about the requirements of an assignment, or due dates/times, please re-read the assignment and/or schedule. If your question is still unanswered, contact me for clarification.

Overall grading scale for all assignments

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

Note: A grade of C or better is required for all Justice Studies major and minor coursework, and desirable for students enrolled in the Forensic Science majors and/or minor.



University Policies

Office of Graduate and Undergraduate Programs maintains university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. You may find all syllabus related University Policies and resources information listed on GUP's Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/

Department of 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.

Academic Integrity

San Jose State University encourage students to undertake their academic studies with the highest integrity and take seriously any instances of student misconduct. Student misconduct can include cheating (examples of which may be in formal or informal examinations, copying work from another student for individual reports or assignments, altering data, submitting work which has been written by another person as your own, resubmitting work that has been submitted previously for academic credit) or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit). Plagiarism detection software such as Turnitin or other methods to detect plagiarism will be used to check your work. Instances of academic dishonesty will not be tolerated. Cheating or plagiarism will result in a failing grade and sanctions by the University.

The University Academic Integrity Policy S07-2 at http://www.sjsu.edu/senate/docs/S07-2.pdf 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 Student Conduct and Ethical Development website is available at http://www.sjsu.edu/studentconduct/.

Student Resources

Forensic Science Student Group (FSS)

<u>SJSU Forensic Science Students</u> 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 extracurricular 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

A wide variety of audio-visual equipment is available for student loaning from Media Services located in IRC 112. Please check <u>online</u> for additional information.

ACCESS Success Center

The Academic Counseling Center for Excellence in the Social Sciences (ACCESS) provides General Education advising for undergraduate students majoring or intending to major in any of the departments in the College of Social Sciences (CoSS). ACCESS Academic Advisors are committed to helping you develop a clear path to graduation and supporting your academic success. You can schedule an appointment and find more information at sjsu.edu/access.

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/



Tentative Course Schedule

Notes about course schedule: The order of the discussed topics and their focus may change according to students' progress and/or any unforeseen circumstances. I reserve the right to change the schedule including the due dates, but only in a manner that benefits students (e.g., due dates can only be pushed back, never moved forward).

Week	Date	Topics	Assignments & Deadlines
1		No class this week	Please read the syllabus and explore the Canvas site.
2	08/25/2021	Course introduction. Overview of the course structure, assignments and expectations.	Check the relevant Module on Canvas. Read NAS report ("Strengthening Forensic Science in the US") up to page 183.
3	09/1/2021	Crash course in forensic science & brief overview of forensic DNA analysis: contemporary & emerging technologies (by the instructor).	Read NAS report (pages 183-237). Read PCAST report (pages 21-65; 151-153). Check the weekly Module on Canvas for additional materials.
4	09/8/2021	Lecture on the digital media principals. Discussing the DMP requirements and other assignments.	Read PCAST report (pages 67-118; 128-130). Check weekly Module on Canvas for additional materials. Last day to choose a topic for your weekly presentations.
5	09/15/2021	Topics for reading and discussion: "Is forensic science truly reliable or is it junk science"? "Sources of error in forensic science"; "Sources of bias in FS".	Weekly presentations. Check Canvas.
6	09/22/2021	Topics for reading and discussion: "Forensic science in the eyes of the judicial system; "Forensic science fallacies"; "Hierarchy of propositions".	Weekly presentations. Check Canvas. Last day to choose a topic for your paper.
7	09/29/2021	"Wrongful convictions and exonerations – the role of forensic science".	Weekly presentations. Check Canvas. Last day to choose a topic for your digital media project.



		Scientific research and academic writing workshop.	
8	10/6/2021	"Implications of DNA transfer, Mixed profiles and Low-template DNA testing".	Weekly presentations. Check Canvas. Swap CV and cover letter with your peers for a feedback.
9	10/13/2021	"Familial and partial profile searches". "DNA databases, pros and cons"	Weekly presentations. Check Canvas.
10	10/20/2021	"Forensic molecular phenotyping: ethical and criminal justice issues". "Forensic genealogy and extended familial searches: ethical and criminal justice issues".	Finalize your research paper.
11	10/27/2021	"Falsification and authentication of forensic evidence"; "Gene editing: ethical and legal concerns". "Application of behavioral genetics in court". "Potential implementation of artificial intelligence (AI) in the criminal justice system".	Swap your research papers for classmates' feedback.
12	11/3/2021	Guest speakers Career prep workshop	Due date for your research paper. Continue working on the digital media presentation.
13	11/10/2021	Guest speakers	Due date for your resume and cover letter.
14	11/17/2021	Guest speakers	Continue working on your digital media project.
15	11/24/2021	Thanksgiving/Fall Recess - No instruction	Finalize your DMP assignment and submit for a feedback.
16	12/1/2021	Course summary	Due date for your digital media project. Extra credit assignments due date.
Main exam/alterna tive activity	December 14, 12:15-2:30 PM	Digital media presentations and discussions.	