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Spring 2012

Forensic Science Forum

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New Courses, Exciting Changes in the Forensic Science Program

Some important changes are coming to the Forensic Science program at SJSU! Beginning in Fall 2012: Forensic science courses will be listed with the prefix FS rather than JS, making them easier to identify; some course numbers and titles have changed; and new courses have been developed and added to the curriculum as electives. Three new certificate programs will also launch this coming fall in the subject areas of CSI, Biology or Chemistry. Information on those programs is forthcoming.

Please note these new designations:

- FS 11 Survey of Forensic Science (replaces JS 10 for FS majors)
- FS 160 Special Topics in Forensic Science
- FS 161 Crime Scene Investigation (formerly JS 112)
- FS 162 Forensic Science Applications (formerly JS 113)
- FS 163 Fingerprint Science
- FS 164 Crime Scene and Evidence Photography
- FS 165 Forensic Biometrics
- FS 166 Forensic Chemistry
- FS 167 Forensic Molecular Biology
- FS 168 Fluorescent Applications in Molecular Biology & Forensic Science
- FS 169 Forensic Science Senior Seminar
- FS 170 Forensic Science Internship

Courses that are no longer required: JS 10, 14, 16 or 20.

Major forms and 4-year roadmaps are available at this site: http://www.sjsu.edu/justicestudies/degrees/bs-forensic-science/

Please bring your major form (filled out in advance) to every advising appointment, and be sure to meet with your advisor once every semester to make sure you are on track!

Spring 2012 Forensic Science Seminar Series

Cristián Orrego Benavente
Forensic Genetic Evidence in Investigations and Decisions by the International Criminal Tribunals
Weds, February 29, 1530-1650
Location: TBD

Watch for announcements of additional seminar speakers.

The Forensic Science Reference Collection Project

-Nadira Aliusic, Microbiology, 2013
& Corissa Harris, FS Bio, 2012

This past semester, the FSRCP got underway! Students from the Justice Studies Department participated in the collection of inked shoe prints collection their Converse shoes. Shoes were inked with fingerprint ink, and students deposited a print from each shoe onto a 8”x11” sheet of white paper. These prints, and others, will be used for reference and comparison exercises in future forensic science classes, as forensic scientists must often conduct detailed ACE-V analyses on pattern-type evidence (such as shoe prints).

Collections this semester will include cigarettes, soil samples, and inked tire tracks. So…
- If you are a smoker, please consider donating one unsmoked cigarette to the collection.
- If you wear shoes, consider participating in the next shoe print collection.
- If you drive a car, consider allowing FS students to ink and record your tires!
- And, if you live anywhere near dirt, please bring us a jarful (with exact location).

Any help with this project is greatly appreciated, and we welcome participation from students in all majors! For info, please contact: Becky (beckytilney@yahoo.com), Corissa (corissa1084@gmail.com), or Nadira (alicusic.nadira@gmail.com)
The UC Davis Forensic Science Master’s Program

-Agata Skrzypiec, FS Bio, 2009

After graduating SJSU, I decided to apply to the Forensic Science Graduate Program at UC Davis. I knew a Masters degree would benefit me and make my application stand out when I began my job search. I am now a third-year student in the program and am also in the hiring process for a Criminalist position at a DOJ lab. I would like to describe the program for those who are unfamiliar with it, as it’s a great option to consider after graduating from SJSU.

The Forensic Science Program at UC Davis is divided into two tracks--DNA or Criminalistics--which is similar to SJSU’s two forensic science major options. The DNA track is for students interested primarily in DNA analysis, while the Criminalistics track is for those interested in the other sub-disciplines of forensic science (trace evidence, controlled substances, toxicology, fingerprints, and firearms examination). Incoming students may choose from Plan I, which requires a thesis, or Plan II, which requires a capstone project and more coursework. Plan I is more rigorous because the student must do research, write a thesis, publish in a journal, and do a seminar presentation. Although a lot more work is involved, this option will probably allow for more job opportunities in the future, so I recommend Plan I.

There are many courses that fulfill both required and elective classes, some specific to the chosen track. For example, the DNA-track students take Molecular Techniques and DNA Analysis courses, while the Criminalistics-track students take Analysis of Toxicants and Microscopy. By far one of the most fun classes that the program offers is Homicide Crime Scene Investigation (taught by Faye Springer) which involves processing two mock crime scenes at off-campus locations. Students document scenes (with photos, diagrams and notes), collect and package relevant evidence, and prepare a report to reconstruct the events of the crime. Another great class is Scientific Evidence & Courtroom Testimony, which allows students to testify as expert witnesses in cross-examination during a mock trial. This class improves public speaking and testimony—both critical skills for a Criminalist.

The program also has a student group; the Forensic Science Student Organization. The FSSO conducts monthly meetings where guest speakers present special topics in forensic science (most recently firearms), and occasionally holds special events like Halloween costume parties and trips to the corn maze in Dixon. In addition to being a source of knowledge and information, the FSSO is also a great way to socialize and get to know fellow students better.

The deadline for fall admission is February 1 for priority review, and the absolute deadline is March 1. Admission is competitive but is not based on GRE scores, so taking the GRE is not necessary. Applications include a personal statement, three letters of recommendation, and official transcripts, along with the application form and fee. Official transcripts and letters of recommendation may take some time, so get these prepared early.

My best advice for those accepted into the FS program (and choose Plan I) is to decide on your research topic by the end of the first quarter. The process of beginning the research can be very time consuming, so it is best to get started as quickly as possible, especially if you wish to complete the program in two years. As soon as you receive the letter of acceptance, begin emailing and meeting professors to see what research opportunities are available.

The graduate program at UC Davis is a great complement to the undergraduate work at SJSU, and I highly recommend it to those seeking a higher education or interested in pursuing their own research. For more information, please visit: http://forensicscience.ucdavis.edu.

Join a Professional Organization NOW!

There are a number of benefits to joining a professional organization while you are still a college student—not the least of which is the reduced cost of membership. As a member, you may attend annual meetings, seminars and conferences at a reduced cost—or even free if you volunteer for the conference—where you can present your research, hear others’ exciting presentations and network with future colleagues. You will also receive the association’s publication (usually a scientific journal), which contains current research, scholarly articles and commentary. Membership in a professional organization is also one way to show a potential employer that you are serious and dedicated.

Three organizations that should be of interest to you are:

- American Academy of Forensic Sciences http://www.aafs.org
- The California Association of Criminalists http://www.cacnews.org
- The International Association for Identification http://www.theiai.org

Each of these websites maintains current information on graduate and undergraduate programs, scholarships, news, job postings, classes, ethics codes, links to useful sites and, of course, membership applications.

The CAC sponsors the Reed McLaughlin Scholarship for Forensic Bio & Chem students. Previous winners from SJSU include Phil Nahn, Lauren Buban and Clarissa Trogdon, to name just a few.

SJSU’s Forensic Science Program will host this year’s CAC Fall Seminar (Nov 5-9). Contact Mary Juno (mary.juno@sjsu.edu) or Dr. Steve Lee (steven.lee@sjsu.edu) to volunteer or get involved.

Join CAC, IAI or AAFS, and start building your career today!
**My First Death**
*Diamond Cook, FS Chem, 2011*

My internship with the Santa Clara County Medical Examiner/Coroner’s Office this past semester was fantastic. I reviewed cases, which included reading files and viewing case photos and, when time permitted, I assisted in death investigations and viewed autopsies. I also helped by searching and examining death site, moving the body, taking photos, and anything else that might help unravel the mysteries at the scene.

On just the second day on the job, I went to a scene with Coroner Investigator Chaeff. A woman in her late 40’s had been found dead at the bottom of a stairwell in her elderly mother’s house, and we were going there to investigate. On our way there I felt excited, my adrenaline was pumping and I was antsy. All I could think was “YES!!! My second day and I’m already getting action!” (Death is nothing to get excited about, but I couldn’t help my enthusiasm at having this first-hand experience.) Investigator Chaeff told me that in this profession it was extremely important that we choose our words and actions carefully when dealing with the family, as both could influence the family’s reaction to us and to the situation. On our arrival, I was surprised to note that the elderly mother (who had been the one to discover the body) showed no outward or obvious signs of grief. In fact, while interviewing her, she seemed perfectly stable and relaxed in her leopard snuggie and head full of rollers. She talked calmly and even laughed a few times, and said that she was mad that her daughter had left on all the lights.

The decedent was at the bottom of the stairs, on her back, with what looked like red wine dripping down the side of her mouth. She didn’t look real to me -- maybe because she was dead.

She had been on her way up stairs carrying a glass of water when she misstepped, fell backwards, and hit her head on the wall behind her. The impact caused excessive bleeding from her head and resulted in her death. At the top of the stairs was a half-empty glass of wine, and in the refrigerator was the bottle, one quarter full. After our evaluation of the scene (finding no signs of foul play) and an autopsy, we confirmed the manner of death: accidental.

After just one case, I knew that I was exactly where I needed to be. This internship has confirmed that this is the work I’m destined for! For more information on this and other internships, contact Dr. Steven Lee (steven.lee@sjsu.edu) or Mary Juno (mary.juno@sjsu.edu).

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**San Mateo Crime Lab**

**Latent Fingerprint Internship**
*Amy Griffin, FS Bio 2011*

The San Mateo County Sheriff’s Office Forensic Laboratory has offered an internship to forensic science and justice studies majors for the past three years. Interns train to do real case work in a forensic laboratory latent print unit. Over the past seven months as an intern, I have completed training to be a latent print processing technician, which has included rigorous study, written tests, and proficiency tests all designed to determine my competency to begin case work. Since passing all tests in September, I have been working real cases. This entails receiving packaged evidence related to a variety of crimes such as burglaries, assaults, and even homicides. I treat these items with a variety of physical, chemical, and alternative light sources depending on the composition of the item. For example, the way I process something porous such as paper or cardboard is completely different than the way I would process something nonporous such as metal or plastic. The purpose is to recover any latent impressions on the evidence, photograph them, and forward them to the comparison unit in order to attempt an identification.

Since working in this lab I have developed a passion for latent prints, and hope to go on to work in a latent print unit with the experience I have gained here. The internship has given me a chance to apply what I learned as an undergraduate, and has made my résumé much more competitive in the forensic science job market. I recommend this internship to anyone in forensic science or justice studies. Applications are due in early March, and the one-year commitment begins in June. For more information, see Juno in MQH 527.
Book Review
-Corissa Harris, FS Bio, 2012

Forensic Science in Court: The Role of the Expert Witness by Wilson Wall, published by Wiley-Blackwell, is an expository text targeted at students pursuing a career in forensic science. In the book, Wall provides students with the necessary knowledge to present their work and themselves in court. The point that forensic evidence should speak for itself and never be partisan is strongly supported and restated throughout the chapters. This point is developed with the aid of historical references, examples, and previous court cases. Wall also expresses opinions, however, he illustrates them with concrete examples that, together, make a convincing argument. The style of writing is predominately formal with the occasional informal sentence. This style serves the dual purposes of entertaining the reader and emphasizing the topic, and is suitable for the book’s intended audience.

Wall’s personal experience as an expert witness has made him aware of the importance of understanding the dynamics of the court system. He has been involved in civil rights cases overseas and has given lectures on the details pertaining to being an expert witness at the University of East London, Staffordshire University, and Wolverhampton. Wall is currently a Consultant for Forensic Genetics and a forensic science lecturer at the University of East London and the University of Staffordshire.

The author’s clear writing makes complicated topics easy to understand. Topics include the history of the legal system, forensic evidence, the dynamics of the legal system, the written report, personal presentation in a courtroom, statistics, and ethics. Each chapter is presented in chronological order. However, unlike many textbooks that follow this same format, in every chapter, Wall makes an obvious and helpful connection to the next chapter. A well-written and memorable summary is also found at the end of each chapter, drawing the reader in and often times making him or her pause a moment to think before turning the page.

Aside from the order of topics and the easy flow of chapters, the layout of the book is well designed. The book is comprised of a table of contents, seven chapters that provide enough detail without losing the reader’s interest, an appendix titled Methods of Quoting Published Law Reports in Various Jurisdiction, a Glossary of Commonly Used Words and Phrases for those who may be unfamiliar with certain key terms, and an index. Gray text boxes scattered throughout the book provide examples and additional information to emphasize points made in the chapter. As the author is British, much of the language and descriptions apply to the UK justice system. However, the description of results, standards, and almost all topics discussed are universal and relevant to the US. One limitation for the American reader may be the unfamiliarity with various courts and their names. Although Wall provides occasional distinctions and similarities between the UK and US legal systems, courts, and laws, the reader may have to forge a few links of his or her own. In the beginning of the book, Wall expresses slight bias when he calls the US’s right to bear arms “bizarre.” American readers may also come across unfamiliar vocabulary such as “hakked off” and “muddle”, but these Britishisms do not make the reading difficult, and Wall’s points can still be easily grasped and understood.

Students anticipating a career in forensic science should read this book. It provides insight on what is expected from an expert witness, and information about what to do in preparation for one’s first courtroom appearance. Important concepts that a forensic scientist must keep in mind while on the stand, such as the duty to remain unbiased and to avoid discrediting the evidence, are also revisited throughout the book. To become a successful expert witness, these concepts must become practice. For all of the reasons discussed here, I highly recommend this book. -CH

Forensic Artist and Sculptor Gloria Nusse demonstrates her process for Forensic Biometrics students in the Fall 2011 FS Seminar Series. We hope to have Gloria back to teach a full course in Facial Reconstruction this summer!
FSS News by Rebecca Tilney, FS Chem, 2013
The Forensic Science Students group offers opportunities every semester for students to interact socially and be involved in activities that expand their network and knowledge in forensic science and law enforcement. Last fall, the FSS fieldtripped to Target Masters Shooting Range, attended the SJSU homecoming tailgate and game, participated in special projects and research with professors (including the FSRCP), and attended the excellent Forensic Science Seminar Series.

Probably most exciting was the 2011 Urban Shield, in which thirty-one Federal, International, and State SWAT teams participated in 30 hazmat and crime scene scenarios over a 48-hour period. FSS members volunteered at Site 21 as role players and helpers, watched the teams come through, and worked closely with the Emeryville PD.

These events would not have been possible without the hard work and dedication of FSS members through bake sales and other fundraising activities. Get involved today!

GRAD CORNER
Congratulations Spring 2012 GRADS!
FS Biology: Melissa Estuesta, Mark Fox, Shannon Gonzales, Stan Olszewski, Marilyn Rosa, Casey Whelan
FS Chemistry: Kelly Conroy, Edgar Lopez, Sarah Mansir, Samantha Peek

GRADS in the News...
Marilyn Epp, FS Bio, 2010: Hired by the DEA to conduct project management and investigative research for their Diversion Section at DEA Headquarters in Washington, DC.
Dawn Gringas, FS Bio, 2011: Hired by the state of AZ as a DNA Criminalist.

Send us an update! Are you working? Interning? In graduate school? Baking cupcakes? We want to know!