On October 19, the VCU Forensic Science department, along with the Library of Virginia hosted award-winning mystery writer Marcia Talley and the CSI for Young Mystery Writers Workshop. As part of the Virginia Literary Festival, the event was attended by 20 middle school students from throughout the greater Richmond area and was very successful! These young students were able to tackle forensic investigations hands on and then learn the steps to turning these experiences into a mystery novel. Activities, created by the Forensic Science faculty and lead by current VCU forensic science students, ranged from drawing a crime scene to analyzing their own fingerprints and viewing paint samples under a microscope. The budding scientists were very excited to be using the same laboratories and equipment that their student mentors use on a daily basis. The evening concluded with Ms. Talley leading the students in writing exercises based on the science activities they completed. Events such as this one are critical to inspiring future generations of forensic scientists and the department hopes to make this an annual event. In a few short years, perhaps some of the participants will be back on campus as forensic science students!
Undergraduate Class of December, 2012

Graduates

Cammie Alston
Carla Bacchus
Tiffany Collins
Alexis Cousins
Sean Cronin
Rhonda Daniel
M. Grace Diamond
Cathy Eyi-Mensah
Aerial Ferebee
Antoinette Fox
Sabil Haq
Jasmine Harge
T. Grier Harlow
Saad Khan
Justin Lee
Ishaq Mallik
John Marshall
Mia Maynard
Pamela Parker
Tiffany Rolle
Hinna Shakh
Jessica Smith
Ashley Spence
Megan Tabor
Shana Terry
Teri White
Kristen Whited

Outstanding Undergraduate

Megan Tabor

Leadership & Service

Cammie Alston
Tiffany Collins
Alexis Cousins
Antoinette Fox
Megan Tabor
Chair’s Corner Michelle Peace

Greetings Alumni, Friends, and Students!

VCU is truly an astounding place – and, as you will see in this newsletter, this Department is full of energy, creativity, and excellence! We truly have a difficult time deciding what stories should be featured here as every day something exciting is happening to someone and great advancements are made. So, if you are curious as to other news in the Department, then I encourage you to “like” us Facebook (VCU Forensic Science) and visit our blog (FRSC Blog).

What I hope you take away from this edition is that no matter how you are affiliated with this Department and this University, opportunities are plentiful for you to engage. If you think you have an opportunity or want to take advantage of something we already have going, I invite you to contact us! If you have a story that you think we would like to feature, then please let us know! We’re always combing the archives for potential stories about “what happened to?” and “look what this person is doing!”

Thanks for reading! Thanks for stopping by the Department when you’re in town! Thanks for mentoring our students! Thanks for supporting our scholarship funds that support student achievements! And, thanks for being a part of VCU’s Department of Forensic Science! GO RAMS!!

Graduate Spotlight Hope Parker, Lauren Phillips, Teresa Sikes

The National Institute of Justice in partnership with the Forensic Science Foundation offers research grants each year to students enrolled in FEPAC accredited Forensic Science Programs. This past Fall, three of these grants were awarded to second year graduate students in the Forensic Science Department at VCU: Hope Parker, Lauren Phillips and Teresa Sikes. Each of the students received the maximum amount designated by the grant, bringing a total of $21,000 into the department to fund their research. Hope Parker is working in the Dawson Cruz research laboratory. Her project is focused around incorporating mixture detection into a qPCR multiplex by using Scorpion primers and tri-allelic SNPs. She presented at the AAFS Conference in February and the International Symposium on Microscale Bioseparations in March, and plans to present at MAAFS in May.

Lauren Phillips is working in the Ehrhardt research lab on a project that is analyzing the surfaces of pollen grains from Cornus florida for the presence of volatile organic compounds and trace metals for the identification of forensic signatures. She presented at both the 21st Annual Onsite/Ifpac Conference in January as well as the 65th Annual YFSF AAFS Conference in February. Teresa Sikes is also working in the Dawson Cruz research lab in collaboration with the Landers Bioanalytical Microchip Laboratory at the University of Virginia. Her project aims to develop a simplified, integrated DNA extraction and amplification microdevice on a centrifugal platform with infrared-mediated heating and to test this device with challenge mock-casework samples. She presented at the AAFS Conference in February plans to present at MAAFS in May.
Undergraduate Spotlight: Aryn McClain

I am a third-year Forensic Science student at VCU and am Secretary of the Forensic Science Student Club. I chose to study Forensic Science because it is an ever-changing discipline—there is always room for improving techniques and discovering new ones. Forensic science is also extremely fascinating! Just think, it is nearly impossible to go anywhere without leaving a trace for a forensic scientist to uncover. I love all kinds of puzzles and piecing together a crime is like solving one giant puzzle! I've wanted to be a forensic pathologist since I was 12 years old. A medical examiner acts as the victim’s voice and can help bring peace to the deceased’s family. It will be so fulfilling to piece a crime together from the victim's standpoint in order to help guide investigators in the right direction to "catch the bad guy." I am well-aware of the long years of school ahead of me, but I am so eager to begin my journey! I have been lucky enough to observe autopsies at the Office of the Chief Medical Examiner in Richmond and have shadowed a clinical pathologist at MCV for the last several months. Both of these experiences have boosted my passion for pathology even more. I work part-time as a hostess at The Jefferson Hotel and as an after-school nanny to save money for medical school and in my free time I volunteer at a hospital. But, my favorite hat to wear is my Peppa hat. I am a Peppa in VCU’s famous pep band, The Peppas. I’ve played the trombone for 10 years and I have loved every minute of it. Being part of The Peppas has been a blast.

Since I am on a band scholarship, I have been lucky enough to travel all over the United States following the successes of both the men's and women's basketball teams. In the 2010-2011 season, The Peppas pepped Shaka Smart and his gang through victories in Dayton, OH, Chicago, IL, San Antonio, TX and all the way to the Final Four in Houston, TX. We were even deemed Best Pep Band in America when we won ESPN’s Battle of the Final Four Bands.

In the 2011-2012 season, other sports teams requested The Peppas’ presence at their events. We were able to travel to the women’s CAA basketball tournament in Maryland to pep our Lady Rams through two victories. We also followed Shaka and the guys across the country to Portland, OR for their most recent dance in March Madness.

In this 2012-2013 season, The Peppas are back like never before. We were contracted to play at all men’s and women’s soccer games, field hockey games, and volleyball matches this Fall and all women’s and men’s basketball games this Spring. Whew! It certainly sounds exhausting all laid out like this, but our awesome director, Ryan Kopacsi, keeps the energy up with his crazy moves. He is so passionate about music and VCU sports, so when you combine the two with Ryan's and The Peppas’ energy, you get the Peppa Effect. Last year, we even recorded a CD of our madness!

The Peppas are the backbone of the havoc that wreaks throughout the Siegel Center on game days. We pump up the team and the crowd with our “You Don’t Wanna Go To War” song, and we do a great job heckling the opposing teams. The Peppas play all kinds of music. During January, we invite any middle school and high school instrumentalists to spend a day with us and play music at one of the men’s basketball games. This band is so much fun to be a part of because of all the diversity. We are not affiliated with VCU’s School of Music and anyone can audition for a spot in the band. The Peppas are a bunch of engineering geniuses, science whizzes, art kids, music students, and history buffs who love playing great music and cheering on VCU’s sports teams. You can check out The Peppas at the Battle of the Final Four Bands and other places around the country here. Go Rams!
As I sit here in the middle of Afghanistan, I often ask myself how I did I get to this point! Never in my wildest dreams, even as a forensic science graduate student at VCU, did I say “Yeah I want to go to Afghanistan”. But here I am in a giant sandbox doing battlefield forensic science.

While completing my master’s at VCU, my goal was to work for the Drug Enforcement Administration (DEA) as a Forensic Drug Chemist. That goal was realized by the time I got my degree and within six months I was employed in my dream job at the DEA San Francisco Western Laboratory. I loved that job and could see myself there through retirement.

After being with DEA for about 6 years and a promotion to Senior Forensic Chemist under my belt, I was set. I just had to keep my head down and look toward retirement... in 25 years! Did I really want to spend 25 years testing bags of methamphetamine? Sure I could and I would be happy doing it, it was my dream job after all.

Then, a former coworker put a little bug in my ear. She had moved on to the United States Army Criminal Investigation Laboratory, Expeditionary Forensic Division (USACIL, EFD) as a latent print examiner. She had just returned from her first rotation in Afghanistan and was ready to go back. When I was talking to her she mentioned they were looking for chemists and I should check it out. I shrugged it off contending that I already had my dream job, why would I want to risk that by leaving? A few months and life changes later and my resistance started to change, thinking instead of it as a once in a lifetime opportunity. I am still young and without a house, kids, husband, etc. now is the time to do it, it's now or never.

A big fear of committing to the job was what comes after this? The job market isn't very stable. What if I don’t like it? Once they pull out of Afghanistan, will I still have a job? I eventually had to tell myself that I have to live in the now. I had to trust that my knowledge and experience from VCU, DEA, and USACIL, EFD would make me marketable.

So I took the plunge, within 3 months I was moved to Atlanta starting my next chapter. My current primary duties are to examine improvised explosive devices (IEDs).

After training I was sent into Afghanistan. So far so good. Lots of dust, everywhere and in places it should never be. There are some creature comforts, such as KFC and TGI Friday, but the Afghan culture is all around, especially in the bazaar and other local shops.

One of the biggest impacts of arriving here is that it really hits home why I am here and why there is battlefield forensics in the first place. It is the soldiers who put their life on the line every time they step off the base. The analysis we do in all sections of the lab may give them the needed information to save lives and stop it from happening again.

I don’t know what lies in my future, perhaps I will return to my “dream” job at DEA, but in the now I know that I am where I should be.
I graduated from VCU in 2004 with a BS in Forensic Science. During this time I was also the Treasurer of the Forensic Science Student Club. My senior year I knew that I wanted to specialize in entomology. I completed my doctoral research at Virginia Tech in 2009 where I conducted research involving thermal factors as well as toxicological factors affecting the development of blowflies.

I was commissioned as an Officer in the US Army in April 2009 and spent 19 months at Fort Lewis, WA, working for Public Health Command-West, which helped train Soldiers in various things such as prevention of arthropod-borne disease and proper storage of pesticides. I also helped manage the disease testing Polymerase Chain Reaction (PCR) lab during that time. I later served as the Executive Officer for a Preventive Medicine Detachment. The Executive Officer job was primarily an administrative job where I managed the rolling stock, supplies, and managed the day to day operations for the Commander. I am currently located at Fort Bragg, NC where I serve as the hospital entomologist.

My primary job is mosquito and tick surveillance for the installation where I try and prevent the residents and Soldiers of Fort Bragg from contracting an arthropod-borne disease like West Nile virus.

While I do not have the typical forensic scientist career, I have used many of the skill sets I learned from the VCU Forensic Science Program since I have started with the military. I document information, maintain chain of custody, and write reports. The strong science background in general provided me with lots of useful tools in my military career. When I was managing the PCR lab some of the employees were impressed with my pipetting techniques and my knowledge of molecular biology. This knowledge was primarily gained from my Forensic Molecular Biology class I took when I was at VCU. I am not a molecular biologist by any stretch of the imagination, but I retained enough information from the class to manage the laboratory effectively. I did not end up in a forensic lab, but the skills and diverse science courses I took at VCU provided me the tools to be successful in my military career.
Alumni Spotlight AAFS National Conference

Once again, the VCU Department of Forensic Science hosted a reception at the American Academy of Forensic Science Annual Meeting. This year the meeting was held in Washington so we had a wonderful crowd of students, alumni and friends of the department join us as we celebrated and networked.

Over 100 students, alumni, faculty and friends of the department visited us to enjoy the ice cream bar and participate in activities to help us learn how VCU Makes It Real. “VCU got me my dream job” (alumni), “I am absolutely impressed with the Forensic Science Program and take great pleasure in telling others the VCU story” (friend), and “By following my dreams and aspiring to be a better scientist at the end of the day” (student) were comments received by our guests when asked to write how VCU Makes It Real for them. These responses were entered in a raffle where winners received VCU t-shirts, caps, coffee mugs and Rodney the Ram paraphernalia. In addition, guests had a chance to tell us what they loved about VCU. Stay tuned to our website for a video featuring these participants. We thank you all for your attendance and support of the Department of Forensic Science.
**Dr. Paul B. Ferrara Scholarship in Forensic Science**

Jessica Haithcock, Recipient

The Department of Forensic Science awarded the inaugural Dr. Paul B. Ferrara Scholarship on October 16, 2012 to Jessica Haithcock, a second year graduate student. The scholarship was established by Dr Ferrara’s family and the College of Humanities and Sciences to continue Dr. Ferrara’s legacy in the field of forensic science. Dr. Ferrara served as the director of the Virginia Department of Forensic Science and dedicated 33 years to improving public safety, most notably by pioneering the use of DNA technology. In 1989 and under his leadership, the Commonwealth of Virginia became the first state laboratory capable of performing DNA fingerprinting analyses. In addition to his directorship of VA-DFS, Dr. Ferrara was a professor at Virginia Commonwealth University. Through his passion for teaching and research, as well as his commitment to developing a nationally recognized Forensic Science educational program at VCU, the program officially became a department in 2005. The VCU Department of Forensic Science continues to work closely with the VA-DFS to educate and train students and professionals as well as to perform research in the various forensic science disciplines. The VCU faculty and VA-DFS staff remain committed to cutting edge, hands-on education and are leaders in relevant, scientifically rigorous research.

Jessica was awarded the Dr. Paul B. Ferrara Scholarship for her directed research utilizing Atomic Force Microscopy (AFM) for the identification of forensic signatures indicative of culturing conditions and preparation. The Anthrax investigation in 2001 highlighted the need for forensic signatures that can rapidly identify a threat agent and determine the laboratory in which it was cultured. Since then, many methods have been developed to identify the species or strain of organisms in evidence recovered from a biocrime. However, few forensic signatures exist that indicate the culturing conditions of a threat agent and, therefore, the lab of origin. One promising strategy for addressing this need is analyzing an organism’s cell surface hydrophobicity. Jessica’s research will investigate cell surface hydrophobicity with AFM using chemically modified tips. Specifically, the goal of this project is to characterize the cell surface of different Bacillus spp. spores grown in various culturing conditions. Since AFM can detect minute interactive forces and illustrate nanoscale surface detail, it is a great tool for single-cell analysis. The use of AFM in identifying cell surface hydrophobic differences of Bacillus spores batch cultured in various growth conditions may ultimately help law enforcement agencies investigate acts of bioterrorism or other biocrimes.

**Forensic Science Student Club Adventurous Ventures**

The VCU Forensic Science Student Club has been busier than ever this semester! With new events like the MCV Blood Bank Tour and classic favorites like the Dominion Shooting Range comprising the calendar of events, the club has had a lot to look forward to and has no plans to slow down!

The semester started out with a bang as club members headed down to the biannual stomping ground, Dominion Shooting Range. Students tested firearms of various calibers and learned proper safety protocols. Whether it is a student’s first time or fiftieth, this event is always a hit!

A new event made its first appearance on the Club roster this spring. The club offered students a chance to take a trip to the MCV Blood Bank to find out what happens after they make those campus donations. Many were pleased to find that the process goes well beyond blood typing and separation. With such positive feedback, this may become a new club tradition!

A lucky few visited the medical campus for an in depth tour of the Medical Examiner’s office on March 26th. The list to attend filled up fast, as this event was highly anticipated.

One of the club’s biggest events of the spring is almost here! The entire VCU Forensic community is invited to attend Harold Logan’s Fundraiser for the Hawaiian Association of Authentic Leis, (aka Murder Mystery 2013, featuring a tropical twist) on Sunday, April 14th at 5:30 pm in The Virginia Ballrooms of the VCU Student Commons. Island attire is encouraged! Tickets are $10 and can be purchased at the VCU Breakpoint front desk, beginning Wednesday, March 27th. Seating is limited, so be sure to get yours while you can!

A final celebration closed out the semester’s events, as the season winds down. A Forensic Science Student Club pot luck was held on Saturday, March 23rd.
New Faculty

Lyndsay Durham, M.Ed.

Botetourt – or you can just say Roanoke; whatever is easier for you. Ms. Durham comes to the VCU Department of Forensic Science from a county in southwest Virginia at the foothills of the Blue Ridge Mountains where things are slower paced and a little more relaxed. The move from the country to the “big city” of Richmond was just the change of pace she needed to match her enthusiasm for education. Ms. Durham received both her undergraduate (a B.S. in Forensic Science!) and graduate (M.Ed. in Curriculum and Instruction) degrees from Virginia Commonwealth University. Prior to accepting her position at VCU, Ms. Durham worked in the Breath Alcohol Section at the Virginia Department of Forensic Science. Forensic Science continues to be an area of interest for Ms. Durham as she investigates new and emerging forensic technologies in her role as Grant Facilitator for the Forensic Technology Center of Excellence here at VCU. You may have also seen Ms. Durham around campus since she teaches the FRSC 202 Crime and Science general education course for Undergraduate non-majors and serves as an advisor for some of you guys here in the Department!

Bonnie Brown, PhD

Dr. Bonnie Brown was approved as an affiliate faculty appointment of the Department of Forensic Science. Dr. Brown is a Professor in the Department of Biology where she also serves as the Associate Chair. Dr. Brown received a BS in Biology from the University of Alabama and a PhD in Oceanography from Old Dominion University. After a brief post-doc at Johns Hopkins University, she was hired by VCU as an Assistant Research Professor and was eventually promoted to full Professor. While Dr. Brown is an evolutionary geneticist who primarily studies marine species, her unique multi-disciplinary background offers opportunities across a variety of disciplines. She is well known for her collaborative spirit which is reflected by her appointments and work outside of the Biology Department. In addition to teaching responsibilities and a heavy service load over her 22 year VCU career, Dr. Brown has been able to establish a very successful research laboratory. In the past five years, her laboratory group has published more than 14 peer-reviewed manuscripts and has obtained $500K in external competitive grant funds. Dr. Brown has also served the Department of Forensic Science in numerous ways including research collaboration with forensic science faculty, external/third committee member for graduate student directed research committees, research mentor/PI for forensic science undergraduate students, Chair and member of the Dawson Cruz promotion and tenure committee and developer and co-instructor of FRSC 591 Population Genetics for Forensic Scientists. For these contributions as well as informal interaction with the department, we welcome Dr. Brown to our faculty.
The Department of Forensic Science is excited that we had a tremendous contingent of 46 students and all of the faculty from our Graduate and Undergraduate Programs attend the Annual Meeting of the American Academy of Forensic Science, (AAFS). Congratulations to the 20 students, alumni and faculty of the VCU Department of Forensic Science who presented at the conference.

Lucy Camarena: Optimized Centrifugal Methods for Separation of Semen From Superabsorbent Polymers for Forensic Analysis

Shannon Cassatt: Identification and Quantification of Tapentadol and N-Desmethyltapentadol in Human Urine Using Gas Chromatography-Mass Spectrometry

Lee Dean: Forensic Mixture Analysis: Pre-Emptive Separation of Whole Cells With Flow Cytometry and MHC Class I Allele Tagging

Jacob Easter: Pharmaceutical Identifier Confirmation Via AccuTOF DART

Omar ElJordi: Analysis and Characterization of the First and Second Generation Raving Dragon Novelty Bath Salts

Paige Gardner: Evaluation of Lip Cosmetics Using Raman Spectroscopy

Jessica Haithcock and Cristina Stanciu: Cell Surface Hydrophobicity of Biothreat Agents: A Novel Forensic Signature for the Attribution of Microbial Biocrimes

Kinjalba Jadeja and Justin Nguyen: Camera Phone Photography and AFIS Sufficiency

Jillian Neifeld: Development of a LC/MS/MS Method for the Detection and Quantitation of Zolpidem, Eszopiclone, Ramelteon, and Zaleplon in Blood and Urine

Hope Parker: Development of Scorpion-Based Multiplex qPCR Assay for Pre-Screening Mixture Detection


Lauren Phillips: Gas Chromatography-Mass Spectrometry and Trace Metal Analysis of Pollen Samples: Novel

Kim Samano: Preclinical Investigation of CP47, 497: A Widely Abused Synthetic Cannabinoid

Lisa Schiermeier-Wood: It’s the Right Thing to Do- Virginia’s Ground Breaking Post-Conviction Program


Taylor Shaw: Detection and Disposition of JWH-250, CP47,497, and its C8 Homologue in Mice After Inhalation Exposure Using a HPLC/MS/MS Method

Teresa Sikes: Development of an Integrated Microdevice for DNA Extraction and Amplification of Forensic Samples Using Infrared-Mediated Heating and Centrifugal Force

Scott Watanabe: Testing a combined Approach for DNA and Trace Evidence Recovery Using Tape Lifting on Forensically Important Substrates
Department Collaboration Chris Ehrhardt

Over the last year, my lab has built a few research initiatives that have required us to reach out to other academic departments on campus and build some exciting interdisciplinary partnerships. One example of this is the microbial biosignature initiative. Currently, we are studying the chemical properties of bacterial surfaces and how they change under different culturing conditions. These changes can serve as forensic signatures for bacterial pathogens produced by a particular laboratory facility and subsequently used in a biocrime. Over the last 10 years, forensic researchers have studied these signatures with a variety of standard microbiological techniques such as spectrophotometry, gas chromatography profiling, and fluorescence microscopy. While my lab is continuing to apply these conventional methods to study Bacillus spores (surrogate for Bacillus anthracis, the causative agent for anthrax), we have also begun collaborating with Dr. Vamsi Yadavalli in the Chemical and Life Science Engineering Department at VCU to develop analytical techniques to study bacterial cells in an entirely new way. Specifically, we are using Atomic Force Microscopy (AFM) to profile the nanomechanical properties of the bacterial cell membrane and explore how these may be used to characterize pathogens recovered from the scene of a biocrime. Dr. Yadavalli's expertise in both AFM and biophysical interactions at the nanoscale has been an invaluable addition to this project that has already generated exciting results for the forensic community.

Another research initiative that has required us to build interdisciplinary collaborations at VCU is centered on forensic signatures of pollen grains. Pollen is an important type of trace evidence for forensic scientists. It is ubiquitous in the environment and is routinely found on objects associated with a crime scene (e.g. suspect's clothing, car, weapon). In addition, pollen grains are often found on improvised explosive devices and used to investigate terrorism crimes in foreign countries. The forensic value of pollen lies in the fact that different plant species have defined geographic distributions. Identifying the types of pollen associated with a person or object can help determine their geographic origin and, therefore, help provide leads during a forensic investigation. Typically, the presence of a pollen species will indicate only broad geographic zones (e.g. Southwestern U.S., MidAtlantic U.S.). To increase the forensic value of pollen evidence, we are looking for new ways to analyze pollen grains that may provide more specific geographic information as to its origin. Specifically, we are analyzing the surface chemistry of pollen and identifying compounds that may narrow down the origin of an individual pollen grain to a specific city or even neighborhood within a city. To accomplish this task we are teaming up with Dr. Rodney Dyer's lab in The Department of Biology. Dr. Dyer's expertise is in gene flow and genetic evolution of pollen grains across urban landscapes. His lab has helped shape our experimental designs over the last year as well as our sampling efforts of Dogwood pollen last spring. We have already used our preliminary data to submit two different funding proposals to the National Institute of Justice and the Department of Homeland Security.

Upcoming Department Event

Please join us at the Raymond Hodges Theatre at the Singleton Performing Arts Center for a special Forensic Science performance of Sweeney Todd: The Play. Call the Box Office at 804-828-6026 and mention the Forensic Science BOGO deal to get Buy One get One Free Tickets for the April 21, 3pm performance only!
Graduate Open House

On November 16th 2012, the VCU Department of Forensic Science hosted an Open House for prospective graduate students and their families. Thirty guests from six states came to learn about and tour the department and the Virginia Department of Forensic Science (VA-DFS). To start the day, the prospective students met with Dr. Doug Boudinot (Dean of Graduate Studies), Dr. Tracey Dawson Cruz (Forensic Science Graduate Director), and Dr. Michelle Peace (Forensic Science Interim Chair) to get a welcome from VCU. Additionally, Mr. Pete Marone, the Director of VA-DFS, gave the students a greeting from Virginia’s premiere state crime laboratory system. Then, the students wandered the halls of the department where they had the opportunity to meet with current graduate students, professors, and representatives from the Forensic Science Student Club, Financial Aid, Career Center, and Recreational Services. There were also approximately 20 research posters and their authors lining the walls to provide prospective students with the opportunity to learn about the Department’s aggressive graduate research programs. Many students took a break with faculty to enjoy a delicious meal, provided by the VCU Graduate School. In an afternoon formal session, Dr. Dawson Cruz led the prospective students and their families through a brief discussion about the graduate admissions process, the benefits of the VCU MS program, and details about the curriculum and research requirements. To end the day, current graduate students toured the prospective students around the department’s classrooms, laboratories, faculty research labs and critical areas of the Monroe Park campus. Finally, the prospective students traveled over to the VA-DFS Central laboratory to meet with current staff and alumni, as well as a taking a tour of the laboratory led by Jeff Bann, the VA-DFS Central Laboratory Director. Overall, the Open House exposed the prospective graduate students to the great opportunities available within the VCU Department of Forensic Science. The day was a huge success! The Department plans to offer this event annually, each fall, for prospective students and their families. Information about future events can be found on the Department’s website at www.has.vcu.edu/forensics.

The DART

Last summer, the VCU Department of Forensic Science was very excited to receive a JEOL USA AccuTOF™ DART® Direct Analysis in Real Time Time-of-Flight Mass Spectrometer (DART-MS). The DART-MS has the capability to perform instantaneous analysis of a sample at atmospheric pressure and requires no sample preparation. It has been shown to be useful in the analysis of drugs, explosives, biological samples, and various other trace evidence samples. Dr. Robert “Chip” Cody, one of the inventors of the DART, made a visit to VCU to train Dr. Michelle Peace, Dr. Joseph Turner, and a couple of the graduate students on the instrument. While the instrument is new to the department, research projects, including the analysis of bacterial spores and explosives, have already begun. The Forensic Science Department is enthusiastic for the upcoming research projects and possibilities the DART offers not only to the department, but to the field of forensics.
Meet Our Adjunct Faculty

**Spotlight on:**

**Russ Chandler**

We are thrilled to announce Chief Russ Chandler is the recipient of the Humanities and Sciences Distinguished Adjunct Award for 2013! Teaching our Fire Investigator course Chief Chandler has more than four decades of experience in the fire service, the majority of that time in the field of fire investigations. Working in this field has its rewards, but his real love is teaching, passing on what he has learned over the years. He has taught the graduate Forensic Fire Investigation for the past ten years. Chief Chandler says that “Teaching at VCU has been the highlight of my teaching career because the students are academically outstanding and display a great enthusiasm and dedication to the field they are entering.”

His current full time job is with the Virginia Department of Fire Programs (VDFP) as their Branch Chief of Training & Technical Services. His background includes being a career firefighter, Chief Fire Marshal, and fire & fraud investigator in the private sector with a national investigative firm. Chief Chandler started his teaching career as a part time state fire instructor and as an adjunct instructor at J. Sargeant Community. He was hired by VDFP as the Manager of Fire Investigations where he created the Virginia Fire Marshal Academy which today has received accolades from across the country.

Chief Chandler has two mantras which are repeated in all his teachings. The first is that we are “seekers of truth” above all else. He stresses that we should be doing this in all aspects of our life but most important we must do this in the process of any investigation. The second is that “we are the sum of our experiences.” The fact that he was once a licensed electrician in his early years and an electronic technician while in the Navy have helped him better understand how electricity interacts with fire. He continues this thought process in that each investigation conducted adds to the sum of our knowledge.

Chief Chandler is in the national spotlight with the publication of his textbook, Fire Investigations with Delmar Publishing. He also serves on the National Fire Protection Association Committee on Fire and Explosion Investigations, which creates a published guide titled NFPA 921 Guide for Fire & Explosion Investigations which is internationally the most published text of its kind.

**Sylvia Buffington-Lester**  Ms. Buffington-Lester was educated at Virginia State College with a degree in Vocal Education. Curiosity and fate led her to fingerprints and forensic science. She was employed for 16 years as a fingerprint examiner with the FBI in Washington, DC where she received her initial fingerprint training. Ms Buffington-Lester served as a faculty member of the Virginia Institute of Forensic Science and Medicine for 8 years. She is currently the section supervisor of the Latent Print section at the central laboratory of the Virginia Department of Forensic Science. She teaches Analysis of Pattern Evidence to graduate students. Ms. Buffington-Lester is also a motivational speaker and has received numerous awards, honors and commendations for professional achievements and dedicated community service. Ms. Buffington-Lester maintains a Can Do Dare To Be Different attitude and believes that by using one’s existing talents and abilities, dreams can turn into realities! Most of hers have.

**Mason Byrd**  Mr. Byrd earned a BS in Criminal Justice from the University of South Carolina, an MPA from VCU and a JD from the TC Williams School of Law. In the past, he has worked for the police departments in Gainesville, FL. and the University of Virginia and the Sheriff’s Department in Fluvanna County. In addition he has been a full time Instructor at VCU in the Criminal Justice Program at the School of Government and Public Affairs and Department of Forensic Science. Mr. Byrd is currently a Magistrate Advisor with the Supreme Court of Virginia. He teaches Forensic Evidence, Law and Criminal Procedures to undergraduates and Forensic Evidence and Procedures and Professional Practice and Expert Testimony to graduate students.

**Janine Childress**  Ms. Childress has a BA in Political Science from Arizona State University and later took additional classes at VCU in the Forensic Science Program. Her training in latents began with the National Institute of Forensic Science and Medicine and her training in Footwear was with the National Forensic Science Training Center and the National Institute of Justice. She has been with DFS for 8 years in the Latent section. She is certified by the International Association for Identification in Latent Prints and Footwear examinations. She teaches for the Forensic Science Academy and this is her second year teaching Analysis of Pattern Evidence at the VCU graduate program.

**Kelly Howarter**  Ms. Howarter is currently in her 4th year as an adjunct faculty instructor for the Advanced Drug Analysis class for graduate students. Originally from Pennsylvania, she attended Lycoming College where she earned a chemistry degree before completing a forensic science fellowship program through the Virginia Institute of Forensic Science and Medicine. She is now in her 6th year as a Controlled Substances forensic scientist with the Virginia Department of Forensic Science.

**Dale Mullen**  Mr. Mullen earned a BS from Bluefield College and a JD from the TC Williams School of Law. After serving in the Navy, he worked for the Richmond Police Department and later as an attorney in private practice as well as with the office of the Attorney General in Richmond. Mr. Mullen is currently the County Attorney for Louisa County. He teaches Forensic Evidence, Law and Criminal Procedures to undergraduates.
Adjunct Faculty

Erin Przybylski  Ms. Przybylski is a Forensic Scientist in the Controlled Substances Section at the Virginia Department of Forensic Science Central Laboratory. Erin received her Bachelor’s degree in Chemistry from Louisiana State University before moving to Richmond to receive her Master’s in Forensic Science from VCU. After graduating from VCU, Erin was a fellow with the Virginia Institute of Forensic Science and Medicine and then began her career at DFS. This is Erin’s second semester teaching the Advanced Drug Analysis course to Graduate Students in the Department of Forensic Science.

Stephen Rodgers  Mr. Rodgers teaches the undergraduate Forensic Serology course. He holds a B.S. degree in Biochemistry from the University of Arizona in Tucson. He moved to an internship at the Arizona Dept. of Safety Crime Lab, before finding a position at the Virginia Department of Forensic Science (Va-DFS) in 1995 working as a DNA Database Analyst. Through his tenure at VA-DFS he was trained in Forensic Serology and DNA analysis. He has provided instruction for Fellows of the Virginia Institute of Forensic Science and Medicine as well as assisted instruction of graduate Forensic Serology and DNA courses. He recently obtained his M.S. degree in Forensic Science here at VCU in 2010 and is currently working in the newly established Mitochondrial DNA section of Va-DFS.

Carlo Rosati  Mr. Carlo Rosati has been in the field of Firearms/Toolmarks for the past thirty-three years. In addition to teaching Forensic Analysis Firearms, at VCU, Carlo has been an examiner with Oak Ridge Associated Universities at the FBI Laboratory/TEDAC program since 2009. He is a retired firearms/toolmark examiner from the FBI Laboratory where he was an instructor for several specialized training schools. He is a past member of the Scientific Working Group for Firearms/Toolmark Identification (SWGGUN), and a Distinguished Member of the Association of Firearms and Toolmark Examiners (AFTE). He is a Past President on the AFTE Board of Directors as well as a past member of the Board of Ethics.

Lori Seman  Ms. Seman is a graduate of the VCU Forensic Science graduate program. She worked as a Forensic Scientist in the DNA section of the Alabama Department of Sciences in Mobile, AL for just over 5 years. In September 2012, Lori returned to Richmond to work as an examiner for the Virginia DFS. This is Lori’s first semester as an adjunct and she is teaching the Thursday night section of the undergraduate Forensic Molecular Biology Lab.

Julissa Snell (Armstrong)  Ms. Snell graduated from the forensics program at VCU with an MS, focusing on physical evidence and forensic chemistry. Following her graduation from VCU, she spent a month in India and a month in North Carolina teaching forensic science with Duke University’s TIP program. She is currently employed as a forensic services technician in Virginia Beach. The duties of her position include responding to crime scenes, completing the documentation and processing of the scene and evidence, coordinating other items for laboratory testing, and testifying as an expert in court. She loves working crime scenes because of the unique challenges that each provides, the diversity of the city itself, and working so closely with the officers/detectives. She is very excited to be back at VCU and hope to bring the excitement of the crime scene experience to the students as she teaches Crime Scene Investigation to undergraduates.

Lauren Thonesen  Dr. Thonesen is a new Adjunct Professor at VCU teaching Forensic Molecular Biology Lab to undergraduates. She is originally from Virginia Beach and has wanted to become a forensic scientist since she was about 10 years old. To that end, she graduated from Virginia Tech with a degree in Biochemistry and from VCU with a Ph.D. in Biochemistry. Since graduating from the doctoral program, she was employed as a Forensic Scientist in the Biology Section at the North Louisiana Crime Lab in Shreveport, LA, and was hired in September as a Forensic Scientist at the VA Department of Forensic Science Central Laboratory. She is thrilled to be back in Richmond and to have the opportunity to return to VCU as an Adjunct Professor.

Kevin Whaley  Dr. Whaley completed his undergraduate studies at Southern Arkansas University prior to graduating with honors from the University of Arkansas for Medical Sciences. He subsequently completed a pathology residency at the University of Rochester in Rochester, NY. Upon completion of a fellowship at the Office of the Chief Medical Examiner (OCME) in Richmond, VA, he accepted the position of Assistant Chief Medical Examiner. He is board-certified in Anatomic and Forensic Pathology. In addition to his medical training, Dr. Whaley trained with Herb MacDonell in the discipline of bloodstain pattern analysis. His areas of interest are pediatric pathology and postmortem identification. He teaches Forensic Medicine to undergraduates in the department of Forensic Science.

Carl E. Wolf II  Dr. Wolf received his BS in Chemistry from Gannon University, earned his MS in Criminal Justice, Forensic Science option from VCU and received his Ph.D. in Pathology, Forensic Toxicology specialty from the MCV Campus of VCU. He has been employed at MCV Hospitals since 1987 in various roles in the Clinical and Forensic Toxicology Laboratories. Dr. Wolf regularly consults and/or lectures on toxicology and drug testing issues, teaches Forensic Chemistry to Undergraduates in the Department of Forensic Science, and has been a speaker and coordinator of workshops on various aspects of Forensic Toxicology testing. He has contributed to over 40 presentations and peer-reviewed publications.
Initial expectations of graduate school often involve challenging classes taught by esteemed professors requiring hours of dubious studying, but cowbells? Some may be asking what the relationship is between VCU's forensic science graduate program and cowbells, or even a turf field. As Twain once stated “he has” never let “his” schooling interfere with “his” education,” which is something that many forensic science students have implemented. While the courses are challenging and interesting, as Twain suggest, there is additional education beyond the classroom, which the forensic science graduate students have found through intramural sports.

The IVNVI (pronounced: “Four-N-Six”) intramural sport team has been carried down through the years, being passed on to the entering class at orientation. It is through this team than many first year graduate students get the valuable chance to meet and learn about their peers. If getting muddy and bruised wasn’t enough incentive before, our faculty comprises a large percentage of the IVNVI’s fan base. It is not uncommon to have several ‘passionate’ professors raising Cain on the sidelines with cowbells in tow. For these reasons, having the opportunity to collaborate and chat with other students, whether it is by a completed football pass, intercepting a disk at ultimate frisbee, cheering on at the success of a three-point shot, celebrating a win in floor hockey, or cheering with cowbells, all makes this an invaluable experience.

Altogether, 18 first and second year graduate students in the Forensic Science Department participated in the four sports leagues with VCU Recreational Sports Intramurals. The first season of the fall semester was flag football, where team IVNVI made it to the post-season of the league. With the success of the first season, IVNVI was ready to dominate street hockey with the help of our resident expert, Dr. Miller. Dr. Miller and the 9 graduate students on the team had an intense season and at the end of it all, they won the championship game—catch some of the action here! After winter break, IVNVI decided to take on both the basketball and Ultimate Frisbee leagues, where they finished their seasons strong.

Graduate school is not simply a means to an end, but rather a continuing process. Traditional mindset is that learning and education is accomplished solely in an academic setting; if this is true, then I argue that this education obtained is not complete. A critical part in one’s education is not just what comes from a textbook or is listed on a PowerPoint, but the experiences one gains from interactions with peers and collaborative efforts with faculty and experts. It is through this conglomerate of learning, interactions, and work that truly makes one’s education complete. Therefore, for those of you that will join this outstanding department, I challenge you to view your education in a different perspective, one not just for a classroom, but also on a turf field. The intramural leagues are finished for this academic year, but everyone in the department is ready for the start of the 2013-2014 season. Go IVNVI!