FOREST PARK, GA. (Sept. 19, 2017) – During the summer of 2017, eleven Army ROTC Cadets participated in the inaugural Forensic Internship Program (FIP) hosted by the Defense Forensic Science Center (DFSC) in Forest Park, Georgia.

This four-week program explored the extensive forensic science capabilities that DFSC provides to the Military Criminal Investigative Organizations, Joint Force Commanders, and the Combatant Commands. DFSC’s scientific offerings support military investigations and identifying and expeditionary forensics. Cadets engaged in hands-on laboratory training, research, and mock crime scene investigations, exposing them to the nuanced challenges routinely faced by DFSC scientists when conducting examinations and analysis of evidence and abandoned or captured enemy materials.

“It was a great experience,” reported Cadet Mendiola, a rising senior at St. Johns University, pursuing a degree in Homeland Security. “Loved how friendly the staff was and how helpful everyone was towards us. The people here made our time awesome.”

Cadet Mendiola was one of the eleven rising junior and senior university students that participated in the first Army ROTC Cadet FIP. Seven of the participants are pursuing a degree in the Biological Sciences, three of the students are pursing degrees related to Criminal Justice, and one student was studying Psychology. The majority of the students had no previous experience with forensic science but recognized that what they learned would benefit their careers as junior officers in the Army.

“All of the instructors were very intelligent experts in their fields and made me feel welcome,” said Cadet Stewart, a Biological Sciences major at the Missouri University of Science and Technology. “They maintained an open learning environment and I felt I could always ask questions.”

The FIP instructors consisted of DFSC research scientists and case-working forensic examiners who guided the Cadets through the various DFSC operations. Cadets initially underwent training in the forensic science disciplines offered at DFSC: case management, DNA, drug chemistry, trace evidence, latent prints, digital evidence, forensic documents, and firearms/toolmarks. An emphasis was placed on the application of forensic science in military criminal investigations and site exploitation.
As part of the initial training, Cadets participated in a modified Special Agent Laboratory Training (SALT) course taught by DFSC examiners. The SALT course is regularly offered by DFSC to supplement training received by Special Agents in evidence collection, how to best collect evidence, and the science underpinning its evidentiary value. Staff from the Office of the Chief Scientist (OCS) then taught the students how these disciplines are applied in site exploitation when military personnel are deployed around the world. This basic overview of the forensic science resources provided by DFSC provided the Cadets a better understanding of all the capabilities the lab offers.

Going beyond the application of traditional forensic techniques, Cadets worked with OCS on DFSC-focused research projects. The students were assigned to one of three groups based on their academic experience and comfort with performing scientific research and were assigned a corresponding DNA-related research project: 1) making artificial DNA mixtures, 2) testing the ability of swabs to collect and release DNA, and 3) testing DNA extractions from paper. This research allowed the Cadets to gain basic laboratory skills and to learn forensic DNA typing theory and the analysis techniques used by forensic scientists. Between batches of DNA analysis, the Cadets supported research for the Digital Evidence Branch by sending pictures via SnapChat between two DFSC phones. The data was then analyzed to find forensically relevant information about the pictures that were sent using the metadata associated with the application.

“I really enjoyed my time at DFSC this summer. I hope to have the opportunity to come back and work here sometime in the future,” said Cadet Amoyo, a rising junior at the University of California - Berkeley pursuing a degree in Molecular and Cell Biology.

Over their last week, the Cadets were put to the test during practical exercise scenarios consisting of the exploitation and documentation of a clandestine laboratory, an outdoor shooting scene, and a recovered stolen vehicle that was used in the commission of a crime. At each mock scenario, the Cadets combined all that they had learned during the FIP to properly document and photograph the crime scene and to collect evidence that was left behind. The evidence was then processed by the Cadets using techniques they learned in latent prints, chemistry, firearms, and DNA. They used this evidence to link the three mock crime scenes to a single pair of individuals and put together a case report detailing the analysis of the evidence and the circumstances of the crime. Three students were then selected to testify in a moot court, explaining the collection, evaluation, and analysis of the evidence.

“Overall, my impression of the Cadets during the FIP was excellent,” said Jesse Brown, Team Lead of DFSC’s Trace Chemistry Branch. “The Cadets showed an interest in the nuances of forensics and the testing we performed. They were inquisitive and brought up analysis scenarios that challenged me as an instructor. I look forward to working with the Cadets again in the future.”

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Cadets examine a plastic bottle and glass jar looking for luminous fingerprints.

Cadets processing a mock crime scene by assessing the floor for shoe prints and documenting the scene using digital cameras.

The Cadets pipette as they move through the DNA extraction process.
Army ROTC Cadets pose outside the DFSC facility in Forest Park, Georgia.

The Cadets watch as a DFSC DNA Examiner runs a tape station to determine DNA fragment size.

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