

FORENSIC SCIENCE INSTITUTE

COURSE DESCRIPTIONS

2020-2021

FRSC 1503 Forensics in Popular Media

Forensics in Popular Media will introduce students to depictions of forensic science in today's popular media. Students will critically reflect on the quality of the information found on television, in the movies and on social networks and compare it to the realities of current forensic science practices. **PREREQUISITES: none (Summer)**

FRSC 2503 Introduction to Forensic Science

Introduction to Forensic Science is a survey course designed to acquaint the student with a comprehensive understanding of today's crime laboratories and investigative techniques involving the proper collection, preservation, and analysis of evidence. The student will be introduced to scientific, technological, and experientially-based procedures as they are applied in the criminal justice system. **PREREQUISITES: none (Fall, Spring, and Summer)**

FRSC 2613 Behavioral Aspects of Crime Scenes

This course serves as an introduction to behavioral science and criminal profiling. In this course, students will explore the history of behavioral science in law enforcement; the concept of criminal investigative analysis and profiling; the basic principles of criminal profiling; the structure and function of the FBI's Behavioral Science Units; the evolution of the multi-disciplinary approach to criminal profiling; and legal considerations regarding the use of criminal profiling in the investigation and prosecution of violent crimes. The topics above will be presented through lecture, case presentations by FSI staff, and video documentaries. **PREREQUISITES: FRSC 2503 (Fall, Spring, and Summer)**

FRSC 2713 Digital Evidence

Evidence that is stored on or transmitted by computers plays a major role in a wide range of crimes. This course covers how computers are extensions of traditional crime scenes and how digital evidence can be useful in a variety of investigations from computer intrusions to violent crimes. This course introduces students to how computers and networks function, how they can be involved in crimes, and how they are used as a source of evidence. Topics include computer hardware, network typologies, Internet traces, as well as procedures and tools for properly collecting and preserving digital evidence. **PREREQUISITES: FRSC 2503 or permission of instructor (Fall, Spring and Summer)**

FRSC 2733 DNA for Crime Scene Investigator

DNA for Crime Scene Investigators serves as an introduction to the fundamental principles of forensic biology and DNA analysis. In this course, students will explore practical topics and current challenges in forensic DNA analysis; the interaction between

crime scene investigation and DNA analysis; the basic principles of DNA analysis; communication of results from DNA analysis; the role DNA analysis plays in the multi-disciplinary approach to crime scene investigation; and legal considerations regarding the use of DNA analysis. The topics above will be presented through lecture, case presentations, and student driven discussion. **(Fall, Spring and Summer)**

FRSC 2823 Wildlife Forensics

Wildlife forensic science is a relatively new and diverse discipline in the forensic sciences. Practitioners of wildlife forensics include experts in biology to pathology to digital evidence. The range of subjects that a wildlife forensic investigator may come across makes this an interesting if not challenging job prospect. The crimes that could be investigated include poaching, smuggling, and illegal pet trade to just name a few. This course will examine the different specialties that might be required in a wildlife forensic case and how the case will be approached. PREREQUISITES: FRSC 2503 and BIO 1114 or equivalent **(Spring)**

FRSC 3043 Crime Scene Processing

The course serves as a comprehensive review of all aspects of evidence collection and preservation. Students will learn the process to crime scene management and become proficient in recognizing evidence and determining the proper packaging and preservation methods. Basic methods in crime scene photography, sketching, and documentation will be explored. Students will demonstrate and enhance their understanding of lecture material through actual practical exercises in mock crime scenes. PREREQUISITES: FRSC 2503 **(Fall, Spring and Summer)**

FRSC 3123 Criminal Procedure for Forensic Science

Criminal Procedure for Forensic Science serves as an overview of the American criminal justice system, with particular emphasis on those procedures and processes most applicable to the field of forensic science. Students will be introduced to the constitutional, procedural and administrative aspects of the U.S. justice system and the roles of the many entities and agencies which comprise the system. Students will undertake a study of the laws of arrest and search and seizure, the rules of evidence and the rules of criminal procedure which dictate the manner in which forensic evidence and analysis are introduced and challenged in court. Among the areas specifically addressed will be constitutional law, the phases of jury and bench trials, authentication of evidence, general and expert testimony, rules of discovery, rules of ethics, interagency cooperation, record keeping and retention, and handling and disposition of physical evidence. PREREQUISITES: FRSC 2503 **(Fall, Spring, and Summer)**

FRSC 3223 Landmark Cases in Forensic Science

Landmark Cases in Forensic Science is a course designed to provide students with an understanding of court cases that have helped to shape the forensic community. Students will be given a brief introduction to the court system and then review landmark cases that have impacted the field. At the end of the course, students will participate in a court-based group project utilizing the information learned in the course. PREREQUISITES: FRSC 2503 **(Fall and Spring)**

FRSC 3323 Forensic Interviewing

Forensic Interviewing serves as an introduction to all aspects of forensic and investigative interviewing. Students will learn the methodologies and major steps involved in the interviewing and interrogation process and will become proficient in developing, documenting, and conducting various types of interviews. Among the skills which will be developed are information gathering and evaluation, behavioral assessment, strategy development and implementation, legal review and interpretation, expert testimony, and ethics evaluation. Students will demonstrate and enhance their understanding of the interview process through practical exercises involving a variety of case-based scenarios. Course material will be presented through lectures, textbook and supplemental readings, videos, and team-based exercises. PREREQUISITES: FRSC 2503 (Fall)

FRSC 3333 Forensic Investigations of Mass Disasters

Mass disasters present one of the most difficult challenges for forensic investigators. The scope, scale, locations, and causes of mass disasters vary greatly and create unique situations with problematic investigative issues. This course will cover a variety of issues pertinent to investigations of mass disasters such as scene control, evidence collection, victim identification, hazard and safety issues, and large-scale personnel management. Guest speakers and activities will facilitate hands-on training to provide tools and prepare students for the disaster situations they may encounter. PREREQUISITES: FRSC 2503 (Fall)

FRSC 3423 Forensic Investigations of Clandestine Laboratories

This course involves the forensic investigation of drugs synthesized from precursor chemicals in domestic clandestine laboratories and innocuous plant material spiked with pharmacologically-active compounds. The focus of this course will be the safe processing of clandestine drug laboratories that includes the recognition, collection, packaging, transportation, and in-laboratory examination of associated evidence. PREREQUISITES: FRSC 2503 (Spring and Summer)

FRSC 4143/5143 Crime Scene Reconstruction

Crime Scene Reconstruction serves as a comprehensive overview of computer-based and remote sensing technologies in crime scene reconstruction. The focus of this crime scene course is on the use of computer-based, automated data collection, reconstruction, analysis, and courtroom presentation technologies. Students will demonstrate and enhance their understanding of lecture material through participation in practical crime scene exercises. PREREQUISITES: FRSC 2503 and FRSC 3043 (Spring)

FRSC 4153/5153 Crime Scene Photography

Crime Scene Photography expands on the basic crime scene photography module taught in *Crime Scene Processing*, with an emphasis on advanced photographic techniques particularly well-suited to crime scene photography. Students will learn and practice specific photographic techniques relating to composition, basic exposure concepts, focus and depth of field, electronic flash techniques, and proper methodology

for creating photo documentation of various types of crime scenes. Photographic concepts will be presented through lecture and demonstration. Students will undertake a number of field exercises designed to develop and test their skills in each area of study. Field exercises will be conducted on the UCO campus in the vicinity of the Forensic Science Institute. **PREREQUISITES: FRSC 3043 (Spring and Summer)**

FRSC 4163/5163 Medicolegal Forensics

Death investigations are among the most important, complex, and challenging forensic science responsibilities. Such investigations require an in-depth synthesis of a broad range of Forensic Science disciplines, expertise, and analyses. This course serves as an introduction to all aspects of the application of forensic science to death investigation procedures, processes, and protocols. Students will learn the methodologies and major steps involved in the investigation of untimely death and will become proficient in developing, documenting, conducting, and managing various types of death investigation scenarios. Students will develop skills and knowledge targeted at the integration and synthesis of diverse forensic science disciplines into the death investigation process. Among the skills which will be developed are: information gathering and evaluation; behavioral and interview assessment; scene strategy development and implementation; field and laboratory evaluation of remains; evidence recognition, preservation, documentation, and analyses; autopsy procedures and protocols; legal and regulatory matters, expert testimony; and ethics practices and evaluation. **PREREQUISITES: FRSC 3043 (Fall and Spring)**

FRSC 4243/5243 Forensic Psychology

Forensic Psychology provides an overview to the field with a special emphasis in criminal areas. Students will develop an understanding of the most common intersections between forensic mental health and the law, including the criteria required to work as a professional in various capacities. **PREREQUISITES: FRSC 2503 (Fall and Spring)**

FRSC 4253/4253L and 5253/5253L Forensic Science Analysis & Laboratory

Forensic Science Analysis serves as an introduction to classical and modern forensic science techniques with emphasis on the theory of modern impression evidence examinations. Techniques covered include latent fingerprints, handwriting and related document examinations, firearms and toolmarks, and fracture glass examinations. Automated evidence database applications are discussed and practiced. Emphasis is given to quality control and quality assurance as practiced in today's crime laboratories. Concurrent enrollment in FRSC 4253L/5253L is required. **PREREQUISITES: FRSC 2503 (Fall, Spring and Summer)**

FRSC 4263/5263 Forensic and Biological Anthropology

Forensic anthropology is the application of the theories and principles of biological anthropology to the identification of human remains in order to determine their legal significance. Forensic anthropologists are most often called to scenes when highly decomposed or skeletal remains are discovered. The main role of the forensic anthropologist is to determine if remains are human, if they are recent or ancient, who they were, and what happened to them. Using techniques derived from biological

anthropology, remains are examined to illicit age, sex, ancestry, and other unique characteristics which may be used to identify the individual. This course will guide students through the processes and techniques used by forensic anthropologists to achieve these goals. Students will gain a detailed knowledge of human skeletal anatomy and be able to distinguish human from animal remains. They will also gain an in-depth understanding of taphonomic processes such as decomposition which affect the condition and recoverability of remains. PREREQUISITES: FRSC 2503 and any biology course with junior standing or above **(Fall and Spring)**

FRSC 4273/5273 Advanced Fingerprint Analysis

Advanced fingerprint analysis focuses on the application of AFIS technology to analyze fingerprints and palm prints, to compare exemplars to unknown prints, and to evaluate prints to form a conclusion of identification, elimination, or inconclusive. Students will review ACE-V methodology, learn advanced physical and chemical processing techniques, learn the application of the RUVIS microscope for fingerprint examination, and explore the use of fingerprints within the judicial system. Students will also discuss the vulnerabilities that may occur in the classification and analysis of fingerprints. Students will apply learned techniques and technology to a mock case and will be responsible for collecting and analyzing prints as well as testifying in regard to their evidence. Prerequisite(s): FRSC 4253/ and junior standing or above. **(Fall and Spring)**

FRSC 4303/5303 Forensic Archaeology

Forensic archaeology is a relatively new field in the forensic sciences. Traditionally, exhumations were conducted by forensic anthropologists however there is a growing trend of having individuals trained specifically in archaeology conduct these digs. A forensic archaeologist is trained in the classical methods of excavation however they also have a detailed knowledge of evidence and its collection. Furthermore, the archaeologist must have a working knowledge of human skeletal anatomy so that they can identify any human remains. This class will instruct students in the multiple ways of conducting an excavation with the component of a body exhumation included. The exhumation will include evidence of both a biological and non-biological nature. PREREQUISITES: FRSC 2503 or equivalent **(TBD)**

FRSC 4313/5313 Forensic Pathology

Forensic Pathology serves as a comprehensive study of multidisciplinary scientific principles and techniques which comprise the modern basis in human death investigation and human remains recovery. Emphasis is placed on forensic pathology, odontology of human remains. PREREQUISITES: FRSC 2503 **(TBD)**

FRSC 4323/4323L and 5323/5323L Forensic Toxicology & Laboratory

Forensic Toxicology serves as a “hands-on” introduction to modern toxicological methods in forensic science. Topics and analytical techniques covered include sampling and statistics, sample preparation, instrumentation, and the analyses of alcohol, drugs of abuse, therapeutic drugs, carbon monoxide, and cyanide in biological fluids and tissues.

Concurrent enrollment in FRSC 4323L/5323L is required. PREREQUISITES: FRSC 2503, CHEM 3454 (Fall)

FRSC 4333/4333L and 5333/5333L Forensic Molecular Biology & Laboratory

This lecture and laboratory course presents advanced principles of DNA analysis techniques. Both human (forensic) and non-human applications will be discussed. Major topics covered in this course include DNA extraction, DNA quantification, polymerase chain reaction, DNA fragment analysis, DNA sequencing, and bioinformatic databases. Concurrent enrollment in FRSC 4333L/5333L is required. PREREQUISITES: BIO 3303 (Fall and Spring)

FRSC 4343/4343L and 5343/5343L Forensic Serology & Laboratory

Forensic Serology is structured to provide advanced concepts of serological techniques as it applies to the collection, preservation and examination of biological evidence. This course includes the theory and practice of techniques used to identify and individualize biological samples having a forensic interest. Emphasis is given to quality control and quality assurance as practiced in today's crime laboratory. PREREQUISITES: FRSC 2503 (Spring)

FRSC 4353/5353 Firearm and Toolmark Analysis

Firearm & Toolmark Analysis is an introductory course that will allow students to gain a general understanding of basic Firearm and Toolmark techniques and carry out practical technical assignments under the supervision of the instructor. Students will receive instruction and hands-on experience with firearms (rendered safe), ammunition components, toolmark samples, serial number restorative techniques and cartridge case/projectile macroscopic analysis. PREREQUISITES: FRSC 4253/5253 (Fall)

FRSC 4413/5413 Bloodstain Pattern Analysis

Bloodstain Pattern Analysis investigates the significance of bloodstain patterns found at violent crime scenes. Using bloodstain pattern analysis the student will learn to identify the occurrences that took place during and after a violent attack. Several practical exercises are used to assess the skill and knowledge of the student. Students will demonstrate and enhance their understanding of lecture material through participation in actual practical mock crime scene exercises. PREREQUISITES: FRSC 3043 (Fall and Spring)

FRSC 4423/5423 Bloodstain Pattern Analysis II

Bloodstain Pattern Analysis II is a course of instruction designed for investigators, crime scene technicians, forensic technicians, and others practicing bloodstain pattern analysis. The course will enhance basic skills and develop the novice to a core competency level required for independent analysis. PREREQUISITES: FRSC 4413 (Fall)

FRSC 4443/5443 - Forensic Arson Investigation

This is a comprehensive course on fire investigation emphasizing the use of specialized forensic techniques for the identification of causes of fires. Major topics

included in this course are the chemistry of fire, how to diagram the fire scene, common types of building construction and the effects of construction on how structures burn. Proper collection of physical evidence, documentation, analysis and preservation as related to fire investigations will be emphasized. Prerequisite(s): FRSC 3043 (**Fall and Spring**)

FRSC 4463/5463 Digital Forensics and Lab

Digital Forensics & Lab is designed to provide the student with the fundamental concepts of the forensic analysis of digital evidence. Students will receive step-by-step explanations on how to use the most popular digital forensic tools. Topics include digital imaging, legal restrictions related to personal privacy and electronic communication, examination of FAT and NTFS based file systems, forensic methodologies, and the proper documentation of digital forensic examinations. PREREQUISITES: FRSC 2713 or permission of instructor (**Fall**)

FRSC 4513/4513L and 5513/5513L Forensic Chemistry & Laboratory

Forensic Chemistry serves as a “hands-on” introduction to modern forensic chemistry. Topics and analytical techniques covered include sampling and statistics, sample preparation, instrumentation, and analyses related to drugs, arson, explosives, inks, paints, and polymer evidence. Concurrent enrollment in FRSC 4513L/5513L is required. PREREQUISITES: FRSC 2503, CHEM 3454 or concurrent enrollment in CHEM 3454, or permission of instructor (**Spring**)

FRSC 4533/4533L and 5533/5533L Forensic Microscopy & Laboratory

Forensic Microscopy serves as a comprehensive microscopy course in modern forensic casework. Forensic methods and sample handling procedures developed specifically for microscopic samples will be discussed. An emphasis will be placed on microscopic analysis of forensic fiber and paint samples. Techniques covered include microscope alignment and focus, synthetic fiber and paint examination and developing and fine tuning sample handling skills with microscopic samples. PREREQUISITES: FRSC 2503 and BIO 1114 (**Fall and Spring**)

FRSC 4543/4543L and 5543/5543L Advanced Firearm and Toolmark & Laboratory

Advanced Firearm and Toolmark Techniques is an advanced course focused on chemical restorative techniques and advanced scientific applications and techniques routinely seen in Firearm and Toolmark examinations. Techniques covered include distance determination, caliber and weapon determination, serial number restoration, toolmark examination, cartridge case/projectile macroscopic analysis, and courtroom testimony. Emphasis is given to quality control and quality assurance as practiced in today's crime laboratories. PREREQUISITES: FRSC 4353/5353 (**Spring**)

FRSC 4553/5553 WMD Forensics

Weapons of Mass Destruction (WMD) Forensics will cover topics including chemical, biological, nuclear, radiological and explosive (CBRNE) agents associated with domestic and international terrorism events. Students will be introduced to crime scene processing involving CBRNE events and the corresponding laboratory and field analyses. PREREQUISITES: FRSC 2503 or equivalent (**Fall**)

FRSC 4613/5613 Advanced Forensic DNA Analysis and Lab

Advanced Forensic DNA Analysis focuses on the specific principles and modern procedures used in the analysis of forensic DNA evidence. Other topics include current research and development for forensic DNA instrumentation and applications, statistical interpretation of results, and case report writing. Students will research and present on historical forensic cases and current discussion topics in the field of DNA analysis.

PREREQUISITES: FRSC 4333/5333 (**Spring**)

FRSC 4633/5633 Digital Forensics Tools and Analysis and Lab

Digital Forensics Tools and Analysis & Lab will expose students to advanced concepts in digital forensic analysis and provide an in-depth study of the current tools used in the examination of digital evidence. Topics include: advanced legal concepts, analyzing media with Forensic Toolkit, EnCase, and open source tools, Windows registry analysis, acquisition and analysis of volatile data, E-mail analysis, data hiding techniques, metadata, data carving and log analysis. PREREQUISITES: FRSC 4463/5463 or permission of instructor (**Spring**)

FRSC 4653/5653 Mobile Device Forensics and Lab

Mobile Device Forensics and Lab will present students with proper methodologies in the forensic examination of mobile digital devices. Students will use proper techniques for the collection and preservation of digital evidence on mobile devices and then will use current digital forensic tools to identify and recover data located on cell phones, tablets, and other hand-held digital devices. PREREQUISITES: FRSC 4463/5463 or permission of instructor (**Spring**)

FRSC 4673/5673 Network Forensics and Lab

Network Forensics will introduce students to the tools and techniques of network-based incident response and cybercrime investigations. Students will be taught the fundamentals of internetworking including the OSI Model for network communications and the basic protocols of TCP/IP. Investigative techniques include network evidence acquisition, incident response, full packet capture forensic analysis with open source tools, and gathering/correlating sources of network statistics and logs. PREREQUISITES: FRSC 4463 or permission of instructor (**Spring**)

FRSC 4713/5713 Forensic Pharmacology

Forensic Pharmacology is an advanced course in modern toxicology related to therapeutic, illicit, and abused drugs. Topics covered include different types of cases encountered in forensic pharmacology; how the body reacts to and handles drugs and other exogenous substances when they are introduced into the body; understanding the effect of atypical enzyme isoforms on the course of drugs through the body and the implications for interpretation of analytical toxicology results; and the knowledge and understanding into formulating an opinion about drugs introduced into the body (doses, times, whether acute or chronic) and whether the drugs caused any effect (therapeutic, toxic, lethal) on the body. PREREQUISITE: FRSC 4323 (**Spring**)

FRSC 4813/5813 Ethics and Professional Development

Ethics and Professional Development is designed to develop the future Criminalist or law enforcement professional from classroom to courtroom. The course will cover critical aspects of applying for a job and making students competitive in the job market. Students will learn how to create a professional resume' and cover letter and to become familiar with the application process for the position. The student will develop good interviewing skills to include proper dress and body language. This course will also engage students to practice learned interview skills in a one-on-one interview as well as a panel interview designed to assess the applicant's general life knowledge, ethics, and knowledge of forensic science, law enforcement and general science issues such as quality assurance. Students will be introduced to the "first days on the job" as they transition from the classroom to a professional career and also prepare a curriculum vitae suitable for courtroom presentation. PREREQUISITE: FRSC 2503 **(TBD)**

FRSC 4900 - Practicum In Forensic Science (3 credit hours)

Subject matter will vary within the Institute's field of study. Prerequisite(s): Written permission of instructor. This course satisfies the FSI Capstone Requirement. **(Fall, Spring and Summer)**

FRSC 4900 or 4940 – Field Wildlife Forensic Science (3 credit hours)

Field Wildlife Forensic Science is to be offered at the Shoals Marine Laboratory (SML), Isles of Shoals, Maine. The SML is a summer marine field station operated jointly by Cornell University and the University of New Hampshire. In addition to UCO tuition, additional per-student travel-related expenses (offsetting SML field station room, board, whale watch excursion, and laboratory/necropsy facilities use), are applicable. Students are required to arrange, provide, and fund their own travel expenses to/from the SML pier in Portsmouth, New Hampshire. This course satisfies the FSI Capstone requirement. **(Summer)**

FRSC 4910 - Seminar In Forensic Science

Credit will vary from 2 to 4 hours. Subject matter will vary within the Institute's field of study. Prerequisite(s): Written permission of instructor.

FRSC 4930 - Individual Study In Forensic Science

Credit will vary from 1 to 4 hours. Subject matter will vary within the Institute's field of study. This course may satisfy the FSI Capstone requirement with 3 credit hours and permission of the instructor. **(Fall, Spring and Summer)**

FRSC 4950 - Internship In Forensic Science (3 credit hours)

Subject matter will vary within the Institute's field of study. This course satisfies the FSI Capstone requirement. **(Fall, Spring and Summer)**

FRSC 4960 - Institute In Forensic Science

Credit will vary from 1 to 8 hours. Subject matter will vary within the Institute's field of study.

FRSC 4970 - Study Tour In Forensic Science

Credit will vary. Subject matter will vary within the Institute's field of study.

FRSC 4980 - Workshop In Forensic Science

Credit will vary from 1 to 4 hours. Subject matter will vary within the Institute's field of study. Normally involves lecture, films, guest speaker, etc. A grade of "P" or "F" is given. No more than 6 hours of workshop may be counted toward a bachelor's degree.

FRSC 5000 - Workshop In Forensic Science

Credit will vary from 1 to 4 hours. Subject matter will vary within the Institute's field of study. Normally involves lecture, films, guest speaker, etc. A grade of "P" or "F" is given. No more than 2 hours of workshop may be counted on a master's degree.

FRSC 5223 – Behavior and Crime Scenes

Behavior and Crime Scenes serves as an advanced course in behavioral science and criminal profiling. In this course, students will explore the history of behavioral science in law enforcement; the concept of criminal investigative analysis and profiling; the basic principles of criminal profiling; the structure and function of the FBI's Behavioral Science Units; the evolution of the multi-disciplinary approach to criminal profiling; and legal considerations regarding the use of criminal profiling in the investigation and prosecution of violent crimes. The topics above will be presented through lecture, case presentations by FSI staff, and video documentaries. Prerequisite: FRSC 2503 (Fall, Spring, Summer)

FRSC 5233 – Forensic Interviewing Techniques

Sound interviewing methods, targeted at the solicitation of accurate and truthful information, are a fundamental component of criminal investigations, behavioral analyses, crime scene processing, intelligence gathering, and civil litigation. This course serves all aspects of forensic and investigative interviewing. Students will learn the methodologies and major steps involved in the interviewing and interrogation process and will become proficient in developing, documenting, and conducting various types of interviews. Among the skills which will be developed are information gathering and evaluation, behavioral assessment, strategy development and implementation, legal review and interpretation, expert testimony, and ethics evaluation. Students will demonstrate and enhance their understanding of the interview process through practical exercises involving a variety of case-based scenarios. Lectures will be provided by the primary instructor, along with other UCO faculty members and guest presenters. Prerequisite: FRSC 2503 (Fall)

FRSC 5363 – Advanced Crime Scene Techniques

Advanced Crime Scene Techniques will present the latest research and current application of new technologies to crime scene processing. Topics include crime scene mapping, 3D technologies, panoramic photography and other advanced evidence collection techniques. Students will also explore approaches to managing complex crime scene investigations and media relations. Prerequisite(s): permission of the instructor. (Fall)

FRSC 5373 – Cold Case Review and Analysis

This course will expose students to the various job assignments within a cold case investigation. The students will also learn investigative techniques and organizational policies as applied to cold case investigations. Students will also integrate and apply the rules of evidence in investigating cold cases. In order to expose students to the viewpoints and functions of criminal justice professionals in investigating cold cases, students will work with actual Cold Case Investigators from the Tulsa County Sheriff's Office. Prerequisite: FRSC 3043 **(Fall, Spring and Summer)**

FRSC 5863 – Expert Witness

Expert Witness provides an in-depth analysis of the inter-relationship of science and the law. Topics will include the federal rules of evidence, case law impacting the admission of forensic evidence, and the role and responsibilities of an expert witness in U.S. courts. Students will explore the ethical responsibilities of the forensic scientist as an expert witness and experience testifying as an expert witness in a mock trial setting. Prerequisite: FRSC 5892 **(Spring)**

FRSC 5873 – Research Methods in Forensic Science

Research Methods in Forensic Science is designed to acquaint students with quantitative and qualitative research methodologies, including an in-depth analysis of the following: conceptualization of research, types of sampling strategies, data collection methods, research design, and proposal writing. Prerequisite(s): permission of the instructor. **(Fall)**

FRSC 5881 – Graduate Seminar

Graduate Seminar will acquaint students with a variety of critically important concepts in forensic science to include professional practice and responsibility in law enforcement and intelligence agencies. Students will review current topics in forensic science through a special seminar series presented by invited experts, UCO faculty, as well as participating graduate students. Topics covered will include recent published works, original research, and other current, relevant topics to the practice of forensic science. Prerequisite: FRSC 5873 **(Fall)**

FRSC 5892 – Professional Issues in Forensic Science

Professional Issues in Forensic Science is designed to acquaint students with a variety of critically important concepts in forensic science to include: Law and science interface, current challenges in analysis and testimony, quality control and quality assurance implementation, case work management and crime lab management. In addition, the students will be introduced to current topics in forensic science through a special seminar series. Prerequisite(s): FRSC 5873 **(Spring)**

FRSC 5900 - Practicum In Forensic Science

Credit will vary from 1 to 4 hours. Subject matter will vary within the Institute's field of study.

FRSC 5910 - Seminar/Special Topics

Credit will vary from 1 to 4 hours. Subject matter will vary within the Institute's field of study.

FRSC 5930 – Graduate Capstone or Individual Study

Credit will vary from 1 to 3 hours. Subject matter will vary within the Institute's field of study. Prerequisite(s): Permission of instructor.

FRSC 5950 - Internship In Forensic Science

Credit will vary from 1 to 8 hours. Subject matter will vary within the Institute's field of study. Supervised practical experience gained in a professional field by an advanced or graduate student.

FRSC 5960 - Institute In Forensic Science

Credit will vary from 1 to 8 hours. Subject matter will vary within the Institute's field of study. Prerequisite(s): Permission of instructor.

FRSC 5970 - Study Tour

Credit will vary. Subject matter will vary within the Institute's field of study.

FRSC 5990 - Thesis

Credit will be 6 hours. Subject matter will vary within the Institute's field of study. Prerequisite(s): Permission of instructor.