

# FIVS - FORENSIC & INV SCIENCE (FIVS)

## FIVS 101 Introduction to Academic Success in Forensic and Investigative Sciences

**Credit 1. 1 Lecture Hour.** Orientation to academic success within higher education and specifically the Bachelor of Science degree in forensic and investigative sciences; awareness of academic and campus support services available for student success; development of goals for academic and career planning, including creation and utilization of degree planner; awareness of personal self-management strategies, including learning styles, time management, goal setting, stress management and development of personal strategies for implementation of personal self-management into practice.

## FIVS 102 Continuing Academic Success in Forensic and Investigative Sciences

**Credit 1. 1 Lecture Hour. 0 Lab Hours. 0 Other Hours.** Continued exploration to academic success within higher education and specifically the Bachelor of Science degree in Forensic and Investigative Sciences; increase awareness of academic and campus support services available for student success; develop goals for academic and career planning, including creation and utilization of degree planner; awareness of personal self-management strategies, including learning styles, time management, goal setting, stress management, and development of personal strategies for implementation of personal self-management into practice. Must be taken on a satisfactory/unsatisfactory basis. **Prerequisite:** Grade of C or better in FIVS 101.

## FIVS 123 Forensic Investigations

**Credits 3. 3 Lecture Hours.** Overview of forensics from incident scene to court room verdict; principles, concepts, tools and methodologies used in the science and practice of forensics; examination of various forensic fields; evidence recognition, analysis, interpretation and presentation to diverse audiences.

## FIVS 205 Introduction to Forensic and Investigative Sciences

**Credits 3. 3 Lecture Hours.** Overview of principles, procedures, and concepts of forensic and investigative sciences; instruction in the definitions, scope, and use of tools, techniques and protocols in forensic applications used to resolve social, regulatory, and legal disputes. **Prerequisite:** Freshman or sophomore classification or approval of instructor.

## FIVS 210 Forensic Photography

**Credits 3. 2 Lecture Hours. 2 Lab Hours.** Identification and application of techniques of the practice of photography as applied to forensics. **Prerequisite:** Grade of C or better in FIVS 205; FIVL or FIVS major.

## FIVS 215 Forensic Microscopy

**Credits 3. 2 Lecture Hours. 2 Lab Hours.** Identification and application of techniques of the practice of microscopy as applied to forensics. **Prerequisite:** Grade of C or better in FIVS 205; FIVL or FIVS major.

## FIVS 220 Impression Evidence

**Credits 3. 2 Lecture Hours. 2 Lab Hours.** Individual and class characteristics of footwear, tire track, impression evidence documentation, collection, test impression techniques, shoe and tire tread designs, sizing, manufacturing, wear characteristics, comparison techniques, courtroom preparation and testimony. **Prerequisites:** Grade of C or better in FIVS 210 or concurrent enrollment; FIVL or FIVS majors.

## FIVS 282 Occupational and Professional Development

**Credits 2. 2 Lecture Hours.** Organized instruction in written and oral communication; acquaint students with private and public-sector companies and agencies as well as leading professionals from these firms to reinforce academic instruction and prepare students for the transition to employment, graduate and professional schools. **Prerequisites:** Grade of C or better in FIVS 205; FIVS majors only.

## FIVS 285 Directed Studies

**Credits 0 to 4. 0 to 4 Other Hours.** Directed individual study in forensic and investigative sciences. May be repeated for credit. **Prerequisites:** Freshman or sophomore classification; approval of instructor and department head.

## FIVS 289 Special Topics in...

**Credits 1 to 4. 1 to 4 Lecture Hours. 0 to 4 Lab Hours.** Selected topics in an identified area of forensic and investigative sciences. May be repeated for credit.

## FIVS 291 Research

**Credits 0 to 4. 0 to 12 Lab Hours.** Research conducted under the direction of a faculty member in forensic and investigative sciences. May be repeated for credit. **Prerequisite:** Freshman or sophomore classification.

## FIVS 308 Forensic Implications of Inheritance

**Credits 4. 3 Lecture Hours. 3 Lab Hours.** Forensic genetics with an emphasis on human molecular genetics, population genetics, and genetic application in the forensic sciences. **Prerequisites:** Grade of C or better in BIOL 112; FIVS-SCE and FIVS-LWE majors; junior or senior classification.

## FIVS 316 Biotechnology and Forensics

**Credits 4. 3 Lecture Hours. 3 Lab Hours.** Illustration of the use of a variety of biotechnology methods for forensic applications; appreciation and understanding of the underlying molecular biology techniques that are used in a diverse array of settings including blood analysis, blood typing, DNA fingerprinting and genetic testing; potential future use of advanced sequencing technologies for forensic applications; consideration of social, ethical and legal implications of these procedures and applications. **Prerequisites:** Grade of C or better in FIVS 308; FIVS-LWE or FIVS-SCE majors.

## FIVS 401/SCSC 401 Forensic Soil Science

**Credits 3. 2 Lecture Hours. 2 Lab Hours.** Examination of soils biology, chemistry and physical attributes to solve crimes; soil and geologic characteristics associated with crime scene examination; physical, biological and chemical characteristics and use of trace evidence. **Prerequisite:** Grade of C or better in FIVS 282. **Cross Listing:** SCSC 401/ FIVS 401.

## FIVS 405/CYBR 405 Applied Digital Forensics and Incident Response

**Credits 3. 3 Lecture Hours.** Collection of digital evidence; digital evidence analytics; analysis of log data; malware triage; recover damaged digital evidence; write technical reports on malware and incidents; legal and ethical components of digital forensic science. **Prerequisites:** Junior or senior classification. **Cross Listing:** CYBR 405.

## FIVS 415 Practice and Principles of Science and Law

**Credits 3. 3 Lecture Hours.** Introduction to series of practitioners of forensic science and the justice system; receive instruction on principles, procedures, and practices used in solving legal and societal issues; examine scientific method and scientific knowledge as applied through expert testimony; enhance critical thinking and reasoning skills in studying and debating different positions of current issues of science and law. **Prerequisites:** Grade of C or better in FIVS 205 and FIVS 481; grade of C or better in FIVS 316 and FIVS 435, or concurrent enrollment; FIVS-LWE and FIVS-SCE majors.

## FIVS 420 Controlled Substances

**Credits 2. 2 Lecture Hours.** Classification of effects of controlled substances in impaired individuals, sampling procedures and presumptive testing; history of the controlled substances act of 1970, federal drug scheduling, penalty groups in Texas, legislative complexity and challenges with new psychoactive substances, physiological, sociological, legal and societal aspects of controlled substance abuse. **Prerequisites:** Grade of C or better in FIVS 308; FIVS-LWE and FIVS-SCE majors.

## FIVS 422 Crime Scene Investigation

**Credits 3. 2 Lecture Hours. 3 Lab Hours.** Principles, procedures, processes and hands-on experience for conducting investigations ranging from general crime scene to death investigations. **Prerequisites:** Grade of C or better in FIVS 205 or concurrent enrollment; FIVS-LWE and FIVS-SCE majors.

## FIVS 431/ENTO 431 The Science of Forensic Entomology

**Credits 3. 3 Lecture Hours.** Explores the science, methodology and technology employed to gather, preserve and present information about insects and other arthropods in such a manner that this information can be used in courts of law as evidence and testimony to help resolve issues of a criminal or civil nature. **Prerequisites:** Junior or senior classification or approval of instructor. **Cross Listing:** ENTO 431/FIVS 431.

## FIVS 432/ENTO 432 Applied Forensic Entomology

**Credit 1. 3 Lab Hours.** Laboratory-based offering practical experience using scientific information, methodology, technology, and legal procedures inherent to the field of forensic entomology; emphasis on collecting, preserving, and identifying information as evidence and expert witness testimony in courts of law. **Prerequisites:** Junior or senior classification or approval of instructor. **Cross Listing:** ENTO 432/FIVS 432.

## FIVS 435 Case Studies in Problem Solving

**Credits 3. 3 Lecture Hours.** Development of reasoning strategies by examining a variety of case studies; science and scientific method solving real-world problems as part of an investigative team.

**Prerequisites:** Grade of C or better in FIVS 316 and FIVS 481; grade of C or better in FIVS 415 or concurrent enrollment; FIVS-LWE and FIVS-SCE majors or approval of instructor.

## FIVS 440 Forensic Communications

**Credit 1. 1 Lecture Hour.** Scientific writing and communication, critical thinking, reading, research, writing and oral skills. **Prerequisite:** Grade of C or better in FIVS 308.

## FIVS 481 Seminar

**Credit 1. 1 Other Hour.** Analysis of research topics related to the fields of forensic science and law. May be taken 4 times for credit. **Prerequisites:** Grade of C or better in FIVS 282; FIVS-LWE and FIVS-SCE majors.

## FIVS 484 Internship

**Credits 0 to 4. 0 to 4 Other Hours.** Independent study and supervised field experience related to a professional area or interest in forensic science. May be repeated for credit. **Prerequisite:** Junior or senior classification and approval of instructor.

## FIVS 485 Directed Studies

**Credits 0 to 4. 0 to 4 Other Hours.** Directed individual study in forensic and investigative sciences. May be repeated for credit. **Prerequisites:** Junior or senior classification; upper-division FIVS only; approval of instructor and department head.

## FIVS 489 Special Topics in...

**Credits 1 to 4. 1 to 4 Lecture Hours. 0 to 4 Lab Hours.** Selected topics in an identified area of forensic and investigative sciences. May be repeated for credit.

## FIVS 491 Research

**Credits 0 to 4. 0 to 12 Lab Hours.** Research conducted under the direction of a faculty member in forensic and investigative sciences. May be repeated for credit. **Prerequisite:** Junior or senior classification and approval of instructor.