

CHEMISTRY-SPECIALIZED (CHS)

CHS 3941 - Internship in Forensic Science (1-4 Credits)

An internship provides the student with an opportunity to work on a project in a laboratory or classroom setting. If this work is completed off-campus the student must work with a qualified supervisor at the site as well as a faculty mentor. Goals and objectives will be planned by the student, faculty mentor, and the off-campus supervisor when applicable. Permission of the Department Chair is required and is contingent on the student finding a faculty mentor.

Prerequisite(s): (CHM 2210C or (CHM 2210 and CHM 2210L)) and (CHM 3120C or (CHM 3120 and CHM 3120L))

Attribute(s): WBLI - Work based learning indicator

CHS 4533C - Forensic Biochemistry (3 Credits)

The biochemistry of biomolecules (proteins, carbohydrates, lipids and nucleic acids) will be discussed. Metabolism and enzyme kinetics will be investigated. Techniques used in forensic biochemistry (body fluid stain identification, DNA extraction, DNA quantitation, PCR, and genotyping) will be investigated. Emphasis will be placed on state-of-the-art technologies and their application to forensic challenges such as degradation, sensitivity, specificity, and variation in sample type. Advanced DNA topics including SNPs, microbial DNA, Y-STRs, mitochondrial DNA, and plant and animal DNA will also be discussed. Laboratory included.

Prerequisite(s): CHM 2211C or (CHM 2211 and CHM 2211L)

CHS 4544C - Forensic Chemistry (3 Credits)

This course will introduce students to the latest techniques in the analysis of drugs. Topics will be presented to include organic reactions and mechanisms, techniques and instrumentation such as microscopy, chromatography, infrared spectroscopy, and ultraviolet spectroscopy, GC-MS and nuclear magnetic spectroscopy and their applications in forensic science. Laboratory included.

Prerequisite(s): CHM 2211C or (CHM 2211 and CHM 2211L)

CHS 4905C - Dir. Ind. Res. - Forensic Sci. (1-4 Credits)

Individual study under the direction of a faculty mentor. Topic will be selected based on mutual agreement between the student and the faculty member.