Organic Compound Structure Determination
FOS 717
30 HOURS LECTURE PLUS CONFERENCES, 3 CREDITS.
OFFERED FALL OR SPRING SEMESTER
This is an advanced course in the use of modern instrumentation, both spectroscopic and chromatographic techniques, for the solution of chemical problems. This course discusses relationships between functionality and the observed spectroscopic properties of organic molecules. These relationships are then rationalized and used to logically deduce structures of unknown compounds. Chromatographic techniques and principles will be emphasized. Subsequently, five different spectroscopic methods, Nuclear Magnetic Resonance, Mass Spectrometry, Infrared, Ultraviolet Spectroscopy, and Chiroptical Spectroscopy, will be applied in the structural assignment of unknown compounds. The principles behind these methods will be discussed. There will be considerable emphasis on problem solving to determine molecular structure utilizing all available spectroscopic data. Some lecture classes will be practical demonstrations of the concepts presented. 
Prerequisite(s): Coursework necessary for admission to Master of Science in Forensic Science Program.