Consider the content of an ADJ 175 course titled "FORENSIC INSTRUMENTAL ANALYSIS (4 CR)", which is part of the NOVA College-wide course content summary. The course description outlines the examination of instrumental methods for analyzing physical evidence, focusing on the theoretical and practical applications of ultra-violet, visible, and infrared spectrophotometry, gas chromatography, thin-layer chromatography, electrophoresis, trace metals detection, X-ray, and atomic absorption analyses.

The primary purpose of the course is to provide students with knowledge of the types of examinations performed in forensic evidence analysis and the instruments utilized to conduct such examinations.

Prerequisites and corequisites include a general understanding of chemistry and laboratory capabilities. The course objectives highlight the ability to understand instrumentation and methodology for analyzing accelerants and explosives using infrared spectrometry and gas chromatography/mass spectrometry, as well as other aspects of forensic analysis.

The major topics to be included cover a wide array of forensic sciences, including but not limited to, introduction to forensic chemistry, general laboratory procedures and safety, use of the compound microscope, colorimetric tests, polarized light microscopy, scanning electron microscopy, high performance liquid chromatography, capillary electrophoresis, infrared spectrometry, gas chromatography/mass spectrometry, atomic spectroscopy, refractive index measurements, forensic applications of mass spectrometry including sample ionization, mass analyzers, and sample inlets, and literature and resources.