

<b>Study Programme:</b> Master academic studies of forensics			
<b>Course Unit Title:</b> Principles of Forensic Chemistry			
<b>Course Unit Code:</b> FH-01			
<b>Name of Lecturer(s):</b> Full professor Slobodan Gadžurić			
<b>Type and Level of Studies:</b> Master Academic Studies			
<b>Course Status (compulsory/elective):</b> Elective			
<b>Semester (winter/summer):</b> Winter			
<b>Language of instruction:</b> English			
<b>Mode of course unit delivery (face-to-face/distance learning):</b> Face-to-face			
<b>Number of ECTS Allocated:</b> 6			
<b>Prerequisites:</b> None			
<b>Course Aims:</b>			
<ul style="list-style-type: none"> <li>• Gaining knowledge on applications of analytical chemistry in contemporary forensic research within law regulations.</li> <li>• Enabling students to apply analytical methods and techniques during forensic analyses.</li> <li>• Gaining knowledge on methods and procedures for collecting and analysis of evidence.</li> <li>• Developing critical and ethical attitude to reliability and quality of forensic analyses.</li> </ul>			
<b>Learning Outcomes:</b>			
<ul style="list-style-type: none"> <li>• Demonstrate knowledge on forensic evidence.</li> <li>• List and explain analytical methods which are used in forensic analysis of drugs, alcohol, DNA, blood, fingerprints, glass, fibres, ink, explosives and flammable substances.</li> <li>• Independently choose, modify and apply analytical methods in forensic investigations.</li> <li>• Precisely analyse, interpret and present results in the form of the official report (expertise).</li> <li>• Competently communicate with experts from legal institutions (police, criminology centers, court of justice, medical institutions etc.).</li> </ul>			
<b>Syllabus:</b>			
<i>Theory</i>			
Topics include: evidence and the scene of the crime; the presentation of forensic evidence; document examination; fires, explosions and firearms; illicit drugs, medicaments, dual use substances, alcohol and forensic toxicology; body fluids; DNA analysis; forensic pathology; inorganic forensic materials – glass, soil, gunshot residues. Fibers. Colours. Fingerprints and footprints. Project work, which is undertaken by all students, focuses on the solution of real case studies.			
<i>Practical instructions</i>			
Chemical and instrumental analysis of the drugs (HPLC, GC, IR-FTIR). Ink analysis (TLC). Fiber and textile analysis. Fingerprints and footprints. Explosives and arson analysis. DNA analysis.			
<b>Required Reading:</b>			
1. M. M. Houck, J. A. Siegel: Fundamentals of Forensic Science, Elsevier, 2006			
2. M. E. Juhl: Investigating Chemistry – A Forensic Science Perspective, W.H. Freeman and Company, New York, 2007.			
<b>Weekly Contact Hours:</b> 75	<b>Lectures:</b> 30	<b>Practical work:</b> 30+15	
<b>Teaching Methods:</b>			
Lectures and laboratory work			
<b>Knowledge Assessment (maximum of 100 points):</b> 100			
<b>Pre-exam obligations</b>	points	<b>Final exam</b>	points
Test I	50	Written exam	(100)
Test II	50		