

<b>Course title: Video Surveillance</b>
Course code: 41086
ECTS credits: 6
Requirements: None
<b>Basic information</b>
Level of studies: Master applied studies
Year of study: 1
Trimester: 3
Goal: Introduction to video surveillance operating principles and system elements. Studying typical applications and technical solutions of best practice projects.
Outcome: Students should be able to join teams for design, installation, technical support, maintenance and system integration of video surveillance networks.
<b>Contents of the course</b>
Theoretical instruction
1. VIDEO SIGNAL CHARACTERISTICS: Resolution, digitalization, compression, standards in CCTV
2. CCTV CAMERAS: Basic parameters for configuration, calculation of field of view, optical subsystem, sensors, smart cameras.
3. TRANSMISSION SYSTEMS: Analog – coaxial and twisted-pair cables, digital IP – wireline and wireless
4. RECORDERS AND DISPLAYS: Parameter analysis and comparison of different recorders and displays currently in use. Calculation of recorder capacity, multiplexing
5. PLANNING AND IMPLEMENTING NETWORK VIDEO SURVEILLANCE: IP protocols for video surveillance, ensuring quality of service, transmission capacity calculation, tools for QoS
6. CLOUD: solutions and video management systems for video surveillance
7. APPLICATIONS AND TECHNICAL SOLUTIONS: Overview of equipment and software for typical applications, technical solutions of projects rolled-out in Serbia.
Practical instruction (Problem solving sessions/Lab work/Practical training)
1. Laboratory sessions with IP cameras in LAN environment

2. Camera installation
3. Network and video parameters set-up
4. Comparison of video quality
5. Motion detection configuration
6. Software tools for video surveillance planning
<b>Textbooks and References</b>
1. A.Sugaris, Video Surveillance, Compiled lecture notes, 2017
2. Anthony Caputo, Digital Video Surveillance and Security, Elsevier, 2010
3. Cisco Video Surveillance Manager: Design Guide, Release 7.7, 2015
4. H.Kruegle, CCTV Surveillance, Elsevier 2007
5. Joe Cieszynski, Closed Circuit Television, Elsevier, 2004
<b>Number of active classes (weekly)</b>
Lectures: 3
Practical classes: 3
Other types of classes:
<b>Grading (maximum number of points: 100)</b>
<b>Pre-exam obligations: Points</b>
Activities during lectures:
Activities on practical excersises: 20
Seminary work:
Colloquium: 20
<b>Final exam: Points</b>
Written exam: 60
Oral exam:
<b>Lecturer</b>
Aleksandar Sugaris, PhD
<b>Associate</b>