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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Electronic Engineering |
| **GENERAL INFORMATION** |
| Study program  | **Electronics and Microsystems** |
| Study Module (if applicable) | Electronics |
| Course title | Digital Video Processing |
| Level of study | [ ] Bachelor [x]  Master’s [ ]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [ ]  Autumn [x] Spring |
| Year of study  | 1 |
| Number of ECTS allocated | 5 |
| Name of lecturer/lecturers | Nikolić V. Saša, Cvetković S. Stevica |
| Teaching mode |  [x] Lectures [x] Group tutorials [ ]  Individual tutorials [x] Laboratory work [x]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Basic algorithms for digital video processing: video enhancement, sharpening, filtering, segmentation, object detection etc. Using of mathematical algorithms for operation in digital video processing. Software implementation of presented algorithms in Matlab. Understand and implement alone the basic operations of digital video processing in MATLAB.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Removing noise in the video signal. Superresolution - improving the resolution of video. Stabilization of video sequences. Creating of panorama images based on video. Automatic detection and tracking of moving objects. Detection and extraction of key frames. Content based video browsing. Video watermarking.** |
| **LANGUAGE OF INSTRUCTION** |
| [x] Serbian (complete course) [x]  English (complete course) [ ]  Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)[ ] Serbian with English mentoring [ ] Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **ASSESSMENT METHODS AND CRITERIA** |
| **Pre exam duties** | **Points** | **Final exam** | **points** |
| **Activity during lectures** | **5** | **Written examination** | **20** |
| **Practical teaching** | **15** | **Oral examination** | **20** |
| **Teaching colloquia** | **40** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |