Title:	**DSP- Recognition of feature of Sound**
Lecture hours:	15 lectures + 30 labs
Study period: (summer/winter)	Summer or winter
Number of credits:	4
Assessment methods:	Traditional form of lectures will be supported by video presentations of the most essentials and crucial steps to understand.
Language of instruction:	English
Prerequisites:	Basic programming
Course content:	• Basic introduction to Matlab/Octave and Audacity • Properties of sound - frequency, volume, sampling frequency. • Descriptors for describe time domain. • Descriptors for describe frequency domain. • Methods of analysis sound by histogram and spectrogram • Compose features vectors • Basisc introduction to Weka • Evaluating results features of sound by Weka
Learning outcomes:	During course we introduce a system for generalized sound classification and similarity using a machine learning framework. Applications of the system include automatic classification of environmental sounds, musical instruments, sounds of nature and human speakers. In addition to classification, the system may also be used for computing similarity metrics between a target sound and other sounds in a database. This subject refers into the MPEG-7 international standard for multimedia content description. During lessons will be use software: Matlab or Octave, Audacity, Weka
Name of lecturer:	Dr Krzysztof Tyburek
Contact (email address):	krzysiekkt@ukw.edu.pl
Literature:	1. B. S. Manjunath, Philippe Salembier, Thomas Sikora, " Introduction to MPEG-7: Multimedia Content Description Interface". John Wiley & Sons 2. Krister Ahlersten, "An Introduction to Matlab". bookboon.com. ISBN: 978-87-403-0283-7