

## COURSE DESCRIPTION

<b>Title of the course:</b>	<b>Data Mining Methods</b>
<b>Lecture hours:</b>	<b>15</b>
<b>Study period: (summer/winter semester)</b>	<b>Summer</b> and/or winter semester (available in both semesters)*
<b>Number of credits:</b>	<b>2 ECTS credits</b>
<b>Assessment methods:</b>	The final assessment consists in verifying the assumed learning outcomes by assessing knowledge and skills demonstrated during the performance of problem tasks. The result of the student's work will be reports.
<b>Language of instruction:</b>	english
<b>Prerequisites:</b>	not applicable
<b>Course content:</b>	<p><b>Theory and practice on:</b></p> <ul style="list-style-type: none"> <li>• Initial data preparation for data mining processes.</li> <li>• Introduction to classification problems, division of the data set into training and testing sets.</li> <li>• Rule classifiers, simple tree classifiers, decision tree induction methods.</li> <li>• Classifiers in the form of neural networks.</li> <li>• Discovery of association rules and their algorithms. Algorithms for finding frequent sets and associations, basket analysis.</li> <li>• Naive Bayes classifier.</li> <li>• kNN classifier.</li> </ul> <p><b>Tools used in the laboratory: Statistica Data Miner, Excel</b></p>
<b>Learning outcomes:</b>	<p><b>Knowledge: student</b>  W1. has detailed knowledge of data mining and data processing (K_W08),  W2. knows the methods, techniques and tools used in solving engineering tasks in the area of data mining (K_W12),</p> <p><b>Skills: student</b>  U1. Can obtain information from literature, databases and other sources necessary to solve data mining tasks (K_U01).  U2. Can assess, at a basic level, the usefulness of routine IT methods and tools and select and apply the appropriate method and tools to solve data mining tasks (K_U28).</p>
<b>Name of lecturer:</b>	<b>Izabela Rojek, PhD DSc Eng.</b>
<b>Email address:</b>	<b>izabela.rojek@ukw.edu.pl</b>

\*please underline accordingly