

## Course Description – Summer 2023

<b>Title</b>	Computational Intelligence (CompInt)
<b>Faculty</b>	Computer Science
<b>Professor</b>	Prof. Dr. Martin Golz
<b>ECTS</b>	5
<b>Level</b>	Master
<b>Requirements</b>	Basic knowledge in linear algebra, analysis, and statistics as well as solid programming skills.
<b>Add. Information</b>	
<b>Content</b>	The students will get an introduction to basic goals and the main tasks of computational intelligence. Statistical learning theory is the subject of several lectures. Afterwards, discriminant analysis and regression analysis is presented in linear as well as in nonlinear form, utilizing the method of kernel substitution. Three very important branches are then introduced: boosting machines, support-vector machines, and neural networks. The course finishes with a first course into deep learning, especially deep convolutional and long short-term memory networks.

<b>Title</b>	Технология Биг Дата (Big Data Technologies)
<b>Faculty</b>	Computer Science
<b>Professor</b>	Prof. Dr. Berndt Stiefel
<b>ECTS</b>	5
<b>Level</b>	Master, Bachelor with pre-requisites
<b>Requirements</b>	
<b>Add. Information</b>	<b>This course is taught in Russian and German only.</b>
<b>Content</b>	In-depth explanation of the concept Big Data and data analytics technologies.

<b>Title</b>	Legal Tech Lab
<b>Faculty</b>	Computer Science
<b>Professor</b>	Prof. Dr. Kurt Englmeier
<b>ECTS</b>	5
<b>Level</b>	Bachelor
<b>Requirements</b>	
<b>Add. Information</b>	This course is available as digital course (for download), beside lectures and tutorials.
<b>Content</b>	<p>Legal Tech or Legal Technology is an interdisciplinary field on the intersection between information technology (IT) and jurisprudence. Its goal is the development of concepts, methods, and software systems that support the digital transformation of legal services. The focus of IT services is on detection of facts in various documents (e.g., cases, claims, complaints) and relating them legal matter.</p> <p>The course covers the following topics:</p> <ul style="list-style-type: none"> <li>• Data Science in Legal Tech</li> <li>• Information Retrieval &amp; Text Mining.</li> <li>• Document Management</li> <li>• Smart Contracts</li> <li>• Managing Legal Tech projects, Design Thinking</li> <li>• Aspects of Digital Law</li> </ul>