

Statistics and Probability Theory					
Course Code CIF62006	Student Workload 90 hours	Credits (according to ECTS) 4,5	Semester Sem. 2	Frequency each even-semester	Duration 16 meetings
1	Types of courses <i>compulsory (study programme level)</i>	contact hours 63 hours	independent study 27 hours	class size 40 students	
2	Prerequisites for participation				
3	<p>Learning outcomes</p> <p>IF-PLO-3 Graduates are able to develop professional careers in the field of computer science based on quality aspects, data-based decision making, be responsible, and make continuous improvements.</p> <p>IF-PLO-4 Graduates have the ability to think computationally, design-based thinking, conduct analysis with scientific writing, and are able to apply the values of Technopreneurship in creating product innovations in the Systems or Information Technology domain.</p> <p>IF-PLO-6 Mastering mathematical concepts and/or theoretical computational statistics.</p>				
4	<p>Subject aims</p> <p>Students are able to explain the basic concepts of statistics, the usefulness of concentration measures and the dissemination of data.</p> <p>Students are able to explain the basic concepts of opportunity, compound opportunities, and conditional opportunities.</p> <p>Students are able to explain the concept of random variables, expectation values, along with their distributions, including discrete and continuous random variables.</p> <p>Students are able to explain the concept of sampling, sampling distribution, parameter restoration, as well as hypothesis tests.</p>				
5	<p>Teaching methods</p> <p>lectures, case study, class discussion, presentation</p>				
6	<p>Assessment methods</p> <p>assignment, mid-term examination, end-term examination, project evaluation, practical-skill assessment</p>				
7	This module is used in the following degree programs as well				
8	Responsibility for module				

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Other information

1. Grinstead & Snell, 1997, Introduction to Probability, American Mathematical Society
2. Ross, Sheldon, 2014, A First Course in Probability, Essex: Pearson Education Limited