**Module title**  
Stochastics 1 for Teaching Degree (German Gymnasium)  
Abbreviation  
10-M-STOL-191-m01

**Module coordinator**  
Dean of Studies Mathematik (Mathematics)

**Module offered by**  
Institute of Mathematics

<table>
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<tr>
<th>ECTS</th>
<th>Method of grading</th>
<th>Only after succ. compl. of module(s)</th>
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<td>6</td>
<td>numerical grade</td>
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**Duration**  
1 semester

**Module level**  
undergraduate

**Other prerequisites**  
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**Contents**

Combinatorics, Laplace models, selected discrete distributions, elementary measure and integration theory, continuous distributions: normal distribution, random variable, distribution function, product measures and stochastic independence, elementary conditional probability, characteristics of distributions: expected value and variance, limit theorems: law of large numbers, central limit theorem.

**Intended learning outcomes**

The student is acquainted with fundamental concepts and methods in stochastics, applies these methods to practical problems and knows about the typical fields of application.

**Courses** (type, number of weekly contact hours, language — if other than German)

V (4) + Ü (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (approx. 15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)

Language of assessment: German and/or English creditable for bonus

**Allocation of places**  
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**Additional information**  
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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

§ 73 I Nr. 3

**Module appears in**

First state examination for the teaching degree Gymnasium Mathematics (2019)