# Mathematics 2

**Department code:** IBM2.1  
**Module name in German:** Mathematik 2  

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<tr>
<th>Workload: 150 hours, made up of: 72 contact hours 78 self-study hours</th>
<th>ECTS credits: 5 ECTS</th>
<th>Semester: 2nd semester</th>
<th>Frequency of module: Summer semester</th>
<th>Duration: 1 semester</th>
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**Module type:** Compulsory module  
**Academic level:** Bachelor’s degree  
**Suitability of module:** Recommended pre-requisite for Microeconomics, Macroeconomics, Corporate Finance, Bachelor’s Thesis; study programmes in the fields of business and economics  

1. **Learning outcomes:** Students will be familiar with the possibilities of applying classical mathematical methods to economic situations and problems. They will be able to autonomously employ the business mathematics methods they have learned to perform real-practice tasks involved in business planning and decision-making.

2. **Module content:**
   - Principles of integral calculus
   - Functions with several independent variables
   - Differential calculus of functions with multiple independent variables and their application in production theory, multivariable optimization, homogeneity and elasticity of functions
   - Principles of linear algebra: matrices and vectors, systems of linear equations
   - Linear optimization

3. **Teaching and learning methods:**
   - 3 SWS seminar-type tuition
   - 1 SWS practical tutorial

4. **Module language:** English

5. **Pre-requisites for studying this module:**
   - Required: None
   - Recommended: Mathematics 1

6. **Type of examination:** Written examination

7. **Assessment methods:** Graded

8. **Requirements for awarding ECTS credits:** Student must pass module examination

9. **Other remarks:** None