

## Syllabus

### Course description

<b>Course title</b>	Preparatory course in Mathematics – Mathematics for Economists TSE
<b>Course code</b>	30152
<b>Scientific sector</b>	SECS-S/06
<b>Degree</b>	Tourism, Sport and Event Management
<b>Semester and academic year</b>	22.09 – 26.09.2025
<b>Year</b>	1 <sup>st</sup> year
<b>Credits</b>	-
<b>Modular</b>	No

  

<b>Total lecturing hours</b>	20
<b>Total lab hours</b>	-
<b>Total exercise hours</b>	-
<b>Attendance</b>	required
<b>Prerequisites</b>	not required
<b>Course page</b>	<a href="https://www.unibz.it/it/faculties/economics-management/bachelor-tourism-sport-event-management/course-offering/">https://www.unibz.it/it/faculties/economics-management/bachelor-tourism-sport-event-management/course-offering/</a>

  

<b>Specific educational objectives</b>	<p>The course refers to the educational activities chosen by the student and belongs to the scientific area of Statistics-Mathematics. It is directed towards 1<sup>st</sup> year students and has two broad objectives:</p> <ol style="list-style-type: none"> <li>1) Refresh mathematical knowledge</li> <li>2) Prepare for the course "Mathematics for Economists"</li> </ol>
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<b>Lecturer</b>	<p>Dr. Benjamin Weißing  E-mail: <a href="mailto:Benjamin.Weissing@unibz.it">Benjamin.Weissing@unibz.it</a>  Campus Bruneck- Brunico, 1<sup>st</sup> Floor, Room 1.11;  <a href="https://www.unibz.it/it/faculties/economics-management/academic-staff/person/35796-benjamin-weissing">https://www.unibz.it/it/faculties/economics-management/academic-staff/person/35796-benjamin-weissing</a></p>
<b>Scientific sector of the lecturer</b>	SECS-S/06
<b>Teaching language</b>	English
<b>Office hours</b>	<a href="https://www.unibz.it/en/timetable/?department=26&amp;degree=13009%2C13134">https://www.unibz.it/en/timetable/?department=26&amp;degree=13009%2C13134</a>
<b>Lecturing assistant</b>	-
<b>Teaching assistant</b>	-
<b>List of topics covered</b>	<ul style="list-style-type: none"> <li>• Sets &amp; Operations on Sets</li> <li>• Functions</li> <li>• Numbers <ul style="list-style-type: none"> <li>○ Natural numbers</li> <li>○ Real number</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Combinatorics</li> <li>• Polynomials <ul style="list-style-type: none"> <li>◦ Expanding and factorizing algebraic expressions</li> </ul> </li> <li>• Equations &amp; Inequalities <ul style="list-style-type: none"> <li>◦ Solving linear and quadratic functions</li> </ul> </li> <li>• Visualisation of Functions (plotting graphs) <ul style="list-style-type: none"> <li>◦ Sketching graphs of elementary real functions like absolute value, quadratic and exponential functions</li> <li>◦ Solving systems of linear inequalities in two variables graphically</li> </ul> </li> </ul>
<b>Teaching format</b>	Lectures and moderated discussions.
<b>Learning outcomes</b>	<p><b><u>Knowledge and understanding:</u></b> Basic mathematical knowledge will be revisited and consolidated, familiarity with elementary solution procedures (e.g., for quadratic equations or defining an equation for a straight line) will be generated.</p> <p><b><u>Applying knowledge and understanding:</u></b> With elementary examples from economic theory, a basic understanding for the necessity of mathematical modeling in economics is aimed for.</p> <p><b><u>Making judgments:</u></b> The ability to make fundamental distinctions in Mathematics (linear vs. nonlinear, first order vs. higher order etc.) is aimed for. Moreover, a first intuition for quantitative vs. qualitative models should be provided.</p> <p><b><u>Communication skills:</u></b> Basic abilities to apply a mathematical language in an economical framework will be aimed for. The students will be challenged to discuss with the professor and among each other about mathematical constructions.</p> <p><b><u>Learning skills:</u></b> Prepares for the course "Mathematics for Economists" requiring a solid understanding of mathematical concepts.</p>
<b>Assessment</b>	Informal assessment: tests at the beginning and at the end of the course
<b>Assessment language</b>	English
<b>Evaluation criteria and criteria for awarding marks</b>	marks/grades.
<b>Required readings</b>	No required reading.
<b>Supplementary readings</b>	Will be announced at the beginning of the course.