



### DIDACTICS OF MATHEMATICS

<b>Enrollment year</b>	2018/2019
<b>Academic year</b>	2018/2019
<b>Regulations</b>	DM270
<b>Academic discipline</b>	MAT/04 (COMPLEMENTARY MATHEMATICS)
<b>Department</b>	DEPARTMENT OF MATHEMATICS "FELICE CASORATI"
<b>Course</b>	MATHEMATICS
<b>Curriculum</b>	PERCORSO COMUNE
<b>Year of study</b>	1°
<b>Period</b>	1st semester (01/10/2018 - 18/01/2019)
<b>ECTS</b>	9
<b>Lesson hours</b>	72 lesson hours
<b>Language</b>	Italian
<b>Activity type</b>	ORAL TEST
<b>Teacher</b>	ANTONINI SAMUELE (titolare) - 9 ECTS
<b>Prerequisites</b>	Mathematical knowledge and competencies developed in the "laurea triennale" in mathematics. The course is not recommended for students of the "laurea triennale".
<b>Learning outcomes</b>	The course aims to analyze the main models for Mathematics teaching and learning and the main theoretical frameworks which provide the classical conceptual background for research in Mathematics Education.
<b>Course contents</b>	<p>Teaching-learning Mathematics models:</p> <ul style="list-style-type: none"><li>- the traditional model of knowledge transmission</li><li>- the radical constructivism</li><li>- the social constructivism</li><li>- the theory of didactical situations.</li></ul> <p>Analysis of Ministry of Education documents on Mathematics teaching at the pre-university level.</p>

	<p>Moreover, we will analyse the main tenets of theoretical framework which provide the classical conceptual background for research in Mathematics Education, and investigate how some of the ideas developed within these theories have informed research studies in Mathematics Education.</p> <p>More specifically, we will focus on:</p> <ul style="list-style-type: none"> <li>- Piaget's studies on the development of the cognitive development</li> <li>- Fischbein's studies on intuition</li> <li>- Vygotsky's studies and the cultural-historical approach.</li> </ul>
<b>Teaching methods</b>	Frontal lessons, collaborative activities and discussions. Students will be asked to read some articles which will be collectively discussed during the course. It is required a regular presence at the lessons.
<b>Reccomended or required readings</b>	<ul style="list-style-type: none"> <li>- Articles from scientific journals and other materials made available by the teacher.</li> <li>- Documentation available online on the website of the Italian Ministry of Education (Ministero della Pubblica Istruzione).</li> </ul>
<b>Assessment methods</b>	Oral examination concerning a discussion with the goal to evaluate the knowledge of the topics presented in the course.
<b>Further information</b>	Oral examination concerning a discussion with the goal to evaluate the knowledge of the topics presented in the course.
<b>Sustainable development goals - Agenda 2030</b>	<a href="#">\$lbl_legenda_sviluppo_sostenibile</a>