



MATHEMATICAL ANALYSIS 2	
Enrollment year	2016/2017
Academic year	2017/2018
Regulations	DM270
Academic discipline	MAT/05 (MATHEMATICAL ANALYSIS)
Department	DEPARTMENT OF CIVIL ENGINEERING AND ARCHITECTURE
Course	
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	1st semester (11/09/2017 - 26/01/2018)
ECTS	6
Lesson hours	80 lesson hours
Language	Italian
Activity type	WRITTEN AND ORAL TEST
Teacher	SPINOLO LAURA VALENTINA (titolare) - 6 ECTS
Prerequisites	Fundamental notions and results from the Analysis I and Geometry courses.
Learning outcomes	The course aims at providing the fundamental notions concerning 1) ordinary differential equations 2) differential and integral calculus for multivariable functions The course will mostly focus on the understanding of the main definitions and results, rather than on proofs. Examples and exercises will be extensively discussed. At the end of the course students will be expected to solve exercises concerning first and second order differential equations, partial and directional derivatives, multiple integrals, line and surface integrals, and to master the fundamental definitions and results
Course contents	1. Ordinary differential equations 2. Differential calculus for curves

	3. Calculus for real-valued functions of several space variables 4. Calculus for vector-valued functions of several variables 5. Integration for functions of several variables 6. Vector fields and surface integrals 7. Power series
Teaching methods	Traditional chalkboard classes, discussion sessions and tutoring
Reccomended or required readings	M. Bramanti, C.D. Pagani and S. Salsa. Analisi matematica 2. Zanichelli.
Assessment methods	The final exam will be a written open-answer test. If a student has passed the written exam, he/she can (but does not have to) take an oral exam. The instructors might also ask a specific student to take the oral exam: in this case, taking the oral exam is mandatory.
Further information	Further information concerning the course is available at the web page http://arturo.imati.cnr.it/spinolo/analisiII.htm
Sustainable development goals - Agenda 2030	<u>\$\bl\$ legenda sviluppo sostenibile</u>