SYLLABUS
COURSE DESCRIPTION

COURSE TITLE	**Analysis**
COURSE CODE	76242
SCIENTIFIC SECTOR	MAT/05
DEGREE	Bachelor in Computer Science
SEMESTER	2nd
YEAR	1st
CREDITS	6

TOTAL LECTURING HOURS	40
TOTAL LAB HOURS	20
ATTENDANCE	Generally, attendance is not compulsory, but non-attending students can contact the lecturer at the start of the course to agree on the modalities of the independent study.
PREREQUISITES	There are no prerequisites.
COURSE PAGE	https://ole.unibz.it/

SPECIFIC EDUCATIONAL OBJECTIVES	Type of course: "di base" for L-31 Scientific area: "Formazione informatica di base" for L-31 The aim of this course is to introduce fundamental topics of mathematics that are in support of computer science. In particular, the course will to introduce students to the following topics: 1) sequences and series; 2) univariate functions; 3) derivatives, differentials and Taylor theorem; 4) Riemann integral; 5) logarithmic and exponential functions; and 6) normed vector spaces.

LECTURER	Ognjen Savkovic
SCIENTIFIC SECTOR OF THE LECTURER	INF/01
TEACHING LANGUAGE	English

OFFICE HOURS	Friday 14:00-16:00, It is recommended to make an appointment beforehand by email. Ognjen.Savkovic@unibz.it, office POS 2.02, Faculty of Computer Science, Piazza Domenicani 3
TEACHING ASSISTANT	Ognjen Savkovic, Paola Lecca
OFFICE HOURS	Tuesday 15-16, Paola.lecca@unibz.it Office POS 1.04, Faculty of Computer Science, Piazza Domenicani 3
LIST OF TOPICS COVERED	• Sequences and series • Univariate functions • Derivatives, differentials and Taylor Theorem • Riemann integral • Logarithmic and exponential functions • Normed vector spaces
TEACHING FORMAT	This course will be delivered through a combination of formal lectures and exercises

LEARNING OUTCOMES	**Knowledge and understanding** • Have a solid knowledge of mathematical analysis that are in support of computer science. **Applying knowledge and understanding** • Be able to use the tools of mathematics to solve problems. **Making judgments** • Be able to work autonomously according to the own level of knowledge and understanding. **Communication skills** • Be able to use one of the three languages English, Italian and German, and be able to use technical terms and communication appropriately. **Ability to learn** Have developed learning capabilities to pursue further studies with a high degree of autonomy.

ASSESSMENT	The written exam will consist of a set of verification questions, transfer of knowledge questions and exercises. The aim of the assessment is to check to which degree students have mastered the following learning outcomes: 1) knowledge and understanding, 2) applying knowledge and understanding, 3) making judgment. This holds for both attending and non-attending students.
ASSESSMENT LANGUAGE	English

EVALUATION CRITERIA AND CRITERIA FOR AWARDING MARKS	Final Written Exam, 100% covering the full program. Written exam questions will be evaluated in terms of correctness, clarity, quality of argumentation, problem solving ability.

REQUIRED READINGS	Students should refer primarily to their notes taken in class (lectures and exercise classes) and consult the following textbook: • Title : Real analysis ; Author : John M. Howie ; ISBN : 978-1-4471-0341-7 Supplementary books on the course material are listed below.
SUPPLEMENTARY READINGS	• Title : Analysis by Its History ; Authors : Gerhard Wanner, Ernst Hairer ; ISBN : 978-0-387-94551-4 • Title : Calculus: A Complete Course ; Author : Robert A Adams ; ISBN : 0-321-27000-2
SOFTWARE USED	No software used