

COURSE: Calculus		
ACADEMIC YEAR: 2018/2019		
TYPE OF EDUCATIONAL ACTIVITY: basic		
TEACHER: Angelica Malaspina		
e-mail: angelica.malaspina@unibas.it		website: scienze.unibas.it/site/home.html
Phone: +39 0971 205879		mobile (optional):
Language: italian		
ECTS: (lessons e tutorials/practice) 8	n. of hours: (lessons e tutorials/practice) 72	Campus: Potenza Dept./School: DIS Program: Geological Sciences
<b>EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES</b>  The aim of the lectures is to provide the student with the calculus. Moreover, the course will introduce some basic definitions and elementary algebraic operations on matrices.		
<b>PRE-REQUIREMENTS</b>  The main items required are good background in elementary algebra, goniometry and analytic geometry.		
<b>SYLLABUS</b>  Set of numbers. Limits; derivatives; differentiation of algebraic functions. Applications to maxima, minima, and convexity of functions. The definite integral; the fundamental theorem of integral calculus; applications of integration. The indefinite integral. Sequences and series. Matrix operations, determinants, systems of linear equations.		
<b>TEACHING METHODS</b>  The course includes 72 hours divides in - 48 hours of frontal lectures. The main theorems are shown and examples and applications are provided. - 24 hours of blackboard exercises are proposed.		
<b>EVALUATION METHODS</b>  Partial written examination after the first half of the course and partial written examination at the end of the course. Oral examination.  For those did not pass the two partial written examinations, a complete written examination is scheduled at each exam session. A score of 18 on 30 is needed to pass the written test and to do oral examination.  Use of calculators is admitted. Use of notebooks, tablets, smartphones and books is forbidden.		
<b>TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL</b>  - Analisi Matematica 1, M. Bramanti, C.D. Pagani, S. Salsa, Zanichelli (2014). - Esercizi di Analisi Matematica (vol 1), S. Salsa, A. Squellati (2011).		

- Teacher's handouts/slides on <https://elearning.unibas.it/>

#### INTERACTION WITH STUDENTS

Student office hours:

tuesday and from 11:00 to 13:00 and friday from 11:30 to 12:30.

Students can also contact the teacher by sending an email to [angelica.malaspina@unibas.it](mailto:angelica.malaspina@unibas.it)

web site: [http://oldwww.unibas.it/utenti/malaspina/Teaching.html/MatGeo16\\_17/matematica.html](http://oldwww.unibas.it/utenti/malaspina/Teaching.html/MatGeo16_17/matematica.html)

or <https://elearning.unibas.it/>

#### EXAMINATION SESSIONS (FORECAST)<sup>1</sup>

Written examination dates: 19/02/2019, 07/03/2019, 05/06/2019, 09/07/2019, 17/09/2019, 08/10/2019, 10/12/2019

Oral examination dates will be fixed a week after of every written examination.

It is mandatory to book in each examination on site <https://unibas.esse3.cineca.it/Home.do>

The dates of the intermediate exams will be fixed during the course (probably the first one is expected in early December and the second one at the end of the course).

SEMINARS BY EXTERNAL EXPERTS    YES     NO

#### FURTHER INFORMATION

<sup>1</sup>Subject to possible changes: check the web site of the Teacher or the Department/School for updates.