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**COURSE: INFORMATICS SKILLS**

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**ACADEMIC YEAR: 2019-2020**

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**TYPE OF EDUCATIONAL ACTIVITY: Other Activities**

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**TEACHER: VINCENZO TROTTA**

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e-mail: **vincenzo.trotta@unibas.it**

website:

phone:

mobile (optional):

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Language: **ITALIAN**

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ECTS: 3  
(3 lessons e 0  
tutorials/practice)n. of hours: 24 (lessons e  
tutorials/practice)Campus: **Potenza**  
Dept./School: **Dipartimento di  
Scienze**  
Program:Semester: II  
(FROM 1/10/2019 TO  
20/12/2019-  
20/01/2020)

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**EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES**

- *This course introduces the student to Informatics, using computer databases to store, retrieve and assist in understanding biological information.*
  - *Students will be introduced to the basic concepts behind Bioinformatics and data analysis. Hands-on sessions will familiarize students with the details and use of the most commonly used online tools and resources.*
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**PRE-REQUIREMENTS**

- *basic concepts of informatics and statistics;*
  - *basic concepts of biology;*
  - *basic concepts of genetics.*
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**SYLLABUS**

- *Introduction to bioinformatics: to analyze, organize and visualize biological data in ways that increase understanding of this data.*
  - *Data distribution: internet and the World Wide Web*
  - *Biological databases: Entrez and SRS*
  - *Find region of similarity between a given sequence and other sequences (Basic Local Alignment Search)*
  - *Introduction to Microsoft Office: Word, Excel, Power Point.*
  - *Electronic sheet: to insert, organize and analyze data.*
  - *Data presentation: figures and tables*
  - *Basic statistics in Calc: mean, variance and statistic inference.*
  - *Data analysis: chi-square, F-test and t-Student test.*
  - *Use of the computer for Database searching (SRS, Entrez, FASTA and BLAST).*
  - *Use of the computer for Data analysis.*
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**TEACHING METHODS***24 hour of theoretical lessons and laboratory tutorials*

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**EVALUATION METHODS***Oral examination*

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**TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL**

- *TEXTBOOK: PASCARELLA S., PAIARDINI A. – BIOINFORMATICA – EDS. ZANICHELLI*
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**INTERACTION WITH STUDENTS***Office hours: all days after contact via email*

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**EXAMINATION SESSIONS (FORECAST)<sup>1</sup>***27/01/2020, 24/02/2020, 20/04/2020, 22/06/2020, 20/07/2020, 14/09/2020, 19/10/2020, 14/12/2020.*

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SEMINARS BY EXTERNAL EXPERTS    YES     NO 

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

FURTHER INFORMATION

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