Faculty of Pharmacy and Medicine, Faculty of Information Engineering, Informatics and Statistics, Faculty of Medicine and Dentistry, Faculty of Mathematical, Physical and Natural Sciences

Regulatory text of the inter-faculty Bachelor's Degree in BIOINFORMATICS (class L-2)

A.Y. 2020/2021

ADMISSION REQUIREMENTS

In order to be admitted to the bachelor's degree in Bioinformatics it is mandatory to have an upper secondary school certificate obtained in Italy or abroad and recognized as equivalent. Knowledge of Physics, Chemistry, Biology, Mathematics are required. A good knowledge of the English language is also required. Since the degree course has accession limits, a placement test will be administered.

The pre-determined number of available positions for the a.y. 2020/2021 is 50. Admission to registration is subject to fulfilling an appropriate position in the ranked list.

Guidance on how and when to carry out the placement test, are explained in full detail in the admission announcement ("bando di ammissione"), which will be published concurrently with the event "Porte Aperte alla Sapienza" on the web page "Offerta formativa" of the Sapienza web site:

http://www.uniroma1.it/didattica/offerta-formativa

DEGREE COURSE CHANGES, UNIVERSITY TRANSFERS, DEGREE PROGRAM SHORTENING, RECOGNITION OF ACADEMIC CREDITS

Degree course changes and university transfers

The requests for transfer to the bachelor's degree in Bioinformatics must be provided within the deadlines and in the manner specified in the Sapienza's prospectus "Manifesto degli studi"

Degree program shortening

Who already has a Bcs equivalent diploma may ask enrollment to the second or third year.

Applications will be evaluated by the Council of the Course (CdS) which:

a) Evaluates the total or partial validation of the exams career with the relative grades

b) Establishes the year of the course in which the student will be enrolled

c) Defines the credits which remain to be acquired in order to get the final diploma

Requests should be submitted following the deadlines and rules described in the Manifesto degli studi di Ateneo

To be noted: a student cannot enroll to a Bcs course of the same class of a Bcs diploma which he already acquired.

Criteria for credits' validation

All the previously acquired formative university credits (CFUs) can be validated if refer to courses with programs coherent with current course's curricula described in the Manifesto.

The CdS can certify the equivalence between different disciplinary sectors for validation of CFUs on the base of the courses' programs and of the curriculas' structure.

Already acquired CFUs which are relative to courses evidently equivalent to courses offered by the BcS course in Bioinformatics can be validated. In this case the CdS can define the modality:

a) If the number of CFUs between the courses is identical they will be directly validated

b) In case the number is different the CdS will take in consideration an integrative test

FORMATIVE PLANS

A formative plan contains the list of all courses required for the student career, including free choice courses. These last courses could be selected in the complete courses' offer from Sapienza University.

Each student's formative plan should be approved by the CdS before the student is allowed to register the optional exams' score.

A formative plan can be presented only once in each academic year.

Deadlines will be indicated on the Course's website

The student can get its formative plan approved by telematic procedure on the INFOSTUD informatic platform.

No external courses can be inserted in the formative plan with the exception of free choice courses (12 CFU)

LEARNING MODES

Teaching activities are conventional and distributed on a semi-annual basis

The courses are delivered through frontal lessons and lab sessions in a way to allow the students to dedicate sufficient time for individual study.

The nominal Biinformatics course's length is three years (6 semester terms)

FORMATIVE UNIVERSITY CREDITS (CFUs)

CFUs measure the amount of work required from a student to reach a formative goal. To acquire the CFUs the student has to pass the relative tests.

In the system adopted in Italian and European universities, one CFU should corresponds to 25 hours of student's work distributed among collective activities (lessons or practical training) and individual study.

In the Bioinformatics course, according to Sapienza university's rule s, one CFU corresponds to 8 hours of lesson or 12 hours of practical training or 20 hours of professional training or assisted study.

Informative datasheets for each course are available on the Bioinformatics course website which report the CFUs' distribution for the different activities together with the prerequisites, the formative goals and the programs.

The total amount of CFUs required for the final Diploma is 180.

COURSES SCHEDULE

Courses are organized in two semesters with three exams sessions. Lessons and exams session cannnot overlap.

Exams passed within january 31th of the following year can be considered belonging to the previous academic year.

EXAMS

Students' evaulations for each course are expressed by exams' grades from 1 to 30. The lowest sufficient grade is 18/30.

PREREQUISITES

It is not allowed to take third year exams without having completed the first year exams.

PART-TIME

Modalities and deadlines for asking a part-time regime and the relative rules are available on Manifesto di Ateneo and published on the Sapienza website.

TUTORORIAL ACTIVITIES

Bioinformatics students can profit of tutorial activities by teachers as indicated by the CdS.

FINAL TEST

For the final test students should prepare a short thesis and present and discuss it in front of a teachers' committee. Object of the thesis will be the final experimental stage or, in alternative, a research topic from scientific literature. The thesis will be supervised by a teacher of the course.

The final score will be based on the evaluation of the curriculum studiorum, on the quality of the thesis and of its presentation and discussion and on further elements like for example the time spent to complete the courses. Stages in Italy or abroad, including the participation to Erasmus projects, if appropriately documented, may be considered for improving the score or to the laude attribution. All the documents should be delivered to the didactical secretary together with the thesis.

Modalities and deadlines for fixing the final test and for thesis and documents delivery are indicated on the Course's website.

The final test committee will express a score between 1 and 110 and will attribute the laude if unanimous.

Application of ART. 6 from Student's regulament (R.D. 4.6.1938, N. 1269)

The students enrolled to the Bcs Bioinformatics course, in order to enrich their curriculum studiorum, in addition to the internal courses, may follow during each academic year up to two courses from other Bcs courses from Sapienza and give the relative exams. The Bioinformatics CdS will express its opinion if required by the students' secretary.

These exams neither will be considered for the achievement of the final diploma nor will contribute to the final score, but they will be added to the student's career.

Those students willing to profit of this possibility should submit an application to the students' secretary, as explained in the Manifesto degli Studi. The CdS established that this application can be submitted only after achieving at least 6 CFUs in the Bioinformatics course.

Students' secretary is in the secretary office of Pharmacy and Medicine Faculty (Segreteria della Facoltà di Farmacia e Medicina (scala B piano rialzato Palazzina Affari generali).

Didactical secretary: Dr. Maria Carbone

(Via dei Sardi 70, Tel.: 06/4991.7827, e-mail: bioinformatics@uniroma1.it).

Course website: bioinformatics.uniroma1.it

Institutional website: https://corsidilaurea.uniroma1.it/it/corso/2019/30422/home

For all the other information not included here, please see: Regolamento Didattico di Ateneo on Sapienza website.

Percorso formativo

First year	
First semester	**Second semester**
Principles of Mathematics 1 (6 CFU MAT/09)	Principles of Mathematics 2 (6 CFU MAT/09)
Principles of Physics (6 CFU FIS/03)	
Organic and inorganic chemistry 1 (6 CFU CHIM/03)	Organic and inorganic chemistry 2 (6 CFU CHIM/06)
Biology of the cell 1 (6 CFU BIO/13)	Biology of the cell 2 (6 CFU BIO/13)
Principles of computer science I (6 CFU INF/01)	Introduction to biomedical statistics 1 (6 CFU SECS-S/01)
	Introduction to biomedical statistics 2 (6 CFU MED/01)
30 CFU	**30 CFU**
Second year	
First semester	**Second semester**
Molecular biology 1 (6 CFU BIO/11)	Molecular biology 2(6 CFU BIO/11)
Genetics and computational genomics (6 CFU BIO/18)	Pharmaceutical chemistry (6 CFU CHIM/08)
	Immunology and molecular pathologies (6 CFU MED/04)
Principles of computer science II (6 CFU ING-INF/05)	
Biochemistry 1 (6 CFU BIO/10)	Biochemistry 2 (6 CFU BIO/10)
Microbiology (6 CFU BIO/19)	Bioinformatics I (6 CFU BIO/11)
30 CFU	**30 CFU**
Third year	
First semester	**Second semester**
Bioinformatics II (6 CFU ING-INF/06)	

Bioethics (6 CFU MED/02)	
Molecular biology and genomics (6 CFU BIO/11)	
Student's choice 12 CFU:	
Computational systems biology (6 CFU ING-INF/06) Signal processing and information theory (6 CFU ING-INF/03) Algorithms (6 CFU INF/01) Complex biomolecular networks (6 CFU ING-INF/05) Plant functional genomics (6 CFU BIO/04) Principles of general pathology (6 CFU MED/46) Optimization methods for computational biology (6 CFU MAT/09 Bioinformatics in plant pathology (6 CFU AGR/12)	
	For the final test 9 CFU Further linguistic knowledge 3 CFU Stages and professional training 3 CFU Other knowledge useful for entering into the work market 3 CFU
30 CFU	**30 CFU**