ALMA MATER STUDIORUM - UNIVERSITÀ DI BOLOGNA

2020/2021 Admission Procedure
Bioinformatics

1. Admission Requirements and Application Schedule

To attend the Master's Degree in Bioinformatics it is necessary to have adequate knowledge of Mathematics, Physics, Informatics, Chemistry, or Biology/Biotechnology/Biomedicine

To be admitted to the Master's Degree in Bioinformatics it is necessary to hold:

- an Italian degree in all classes ex. D.M. 270/04

or

- an Italian degree in all classes ex D.M. 509/99

or

- an Italian degree in the previous four-year system

In any case, the admission to the Master's Degree in Bioinformatics is conditional on the assessment of the qualification by an Admission Board. The assessment is made on the basis of the curriculum vitae and the criteria specified below.

Applicants can enrol in the Programme even if they have not obtained their First-Cycle Degree yet, but this must be obtained compulsorily before 26th November 2020 (otherwise their enrolment will be automatically withdrawn).

For applicants holding a foreign degree, the Admission Board will ascertain equivalence between the foreign and the Italian degree.

Italian Language Requirement: if you are a non-Italian citizen and you are admitted to Bioinformatics, **no Italian Language is required** since all activities are carried out in English (applicants need to hold a B2 English Language level, according to the CEFR).

BIOINFORMATICS APPLICATION SCHEDULE 2020/2021					
Intake	Opening	Closing	Open to Non EU	Open to EU and EU assimilated	Possible interviews
FIRST	18/05/2020	15/06/2020	YES	NO	From 22nd to 26th June 2020
SECOND	16/06/2020	10/07/2020	NO	YES	From 20th to 23rd July 2020
THIRD	13/07/2020	11/09/2020	NO	YES	From 21st to 24th September 2020

2. Application procedure[1]

In order to apply to the selection procedure, follow these steps:

1. **Connect** to www.studenti.unibo.it (StudentiOnline) and create your personal user ID and password, by clicking on *'Registrati'* (you may then switch to English by clicking on the top left button). If you are a non-Italian student and you do not have an Italian Fiscal Code, you need to click on "*International Students Registration*" and follow the instructions provided. The Unibo Credentials are valid throughout the whole academic career and are required to access all online services at Unibo. From June 2020 you can access the services also through your SPID Credentials.
2. **Click** on "Entrance exams or requirements check" > "Second cycle degree programme" > "Bioinformatics"
3. **Upload** all the required documents in .pdf format within the set deadlines:

   • Copy of the certification of exams with related credits and marks achieved;
   • Copy of ID or passport (in case of non-EU students living outside Italy, passport is compulsory);
   • Curriculum Vitae et Studiorum (the applicant shall use the format downloaded from the website) including the following information:
     o Detailed curriculum vitae et studiorum;
     o Title of the final examination or of degree thesis, and mark achieved (if available);

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[1] All dates are to be intended in this format: **day/month/year.** All hour references refer to Italian Local Time.

- List of the exams taken and registered in the previous Degree Programme, with their marks;
- Other qualifications, such as a declaration of intent: letter illustrating the motivation and professional and personal aspirations of the candidate with reference to the Master's Degree.
- Proof of the linguistic proficiency in English (a B2 CEFR level is required)

The following can be considered as equivalent to language certificates:

- University Degree obtained in English;

- Self-Declaration stating your English native speaker status (i.e. Italian or non-Italian citizens who are fluent in English due to family history or country of raising).

In case candidates do not hold a B2 English Certificate, the Board will evaluate their competences in English through an interview (more information in point 3).

- For NON-EU citizens with EU-equivalent status[2]: a copy of your valid permit of stay, in case you already have it, or a copy of the receipt for the renewal.

N.B.: You do not have to send documents by e-mail or other means. No admission fees are required for the selection procedure.

3. Evaluation of Applications and Assessment of Personal Preparation

Admission to the Master's Degree in Bioinformatics requires the assessment of adequate skills and competences through one's curriculum vitae.

If applicants are considered to have satisfactory skills and competences according to the evaluation of their CV, they have immediate access to the Master's Degree.
If applicants' skills and competences are not satisfactory according to the evaluation of their CV, they could be asked to undergo an interview, according to the modalities expressed below.

All candidates will receive a communication through Studenti Online that will notify them regarding the score obtained in the evaluation and if:
1) **they are directly admitted to enrolment;**
2) **they need to undergo an interview;**
3) **they are not admitted to the programme.**

Candidates' CVs are evaluated up to 100 points in the following way:

1) Bachelor's Degree or weighted average: max 40 points
Candidates who have graduates will be assessed through their Bachelor's Degree Final Mark, while those who have not graduated yet will be assessed through their weighted average.
Points will be given according to the following charts:

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[2] See https://www.unibo.it/en/international/Who-are-international-students

Candidates with Bachelor's Degree

Degree Mark	ECTS equivalence	Points
110 cum laude	A	40
110	B	37
108-109	B	35
106-107	B	30
104-105	B	25
102-103	C	20
100-101	C	15
97-99	C	10
90-96	D	5
<90	E	0

Candidates without Bachelor's Degree

Weighted average (av)	ECTS equivalence	Points
30,0	A	40
29≤ av < 30	B	37
28≤ av < 29	B	35
27≤ av < 28	C	30
26≤ av < 27	C	25
25≤ av < 26	C	20
24≤ av < 25	D	15
23≤ av < 24	D	10
22≤ av < 23	D	5
av < 22	E	0

The ECTS scale is built according to the following rule:
- *grade A corresponds to the grades obtained by the best 10% of students;*
- *grade B corresponds to the grades obtained by the next 25%;*
- *grade C corresponds to the grades obtained by the next 30%;*
- *grade D corresponds to the grades obtained by the next 25%;*
- *grade E corresponds to the grades obtained by the final 10%.*

The ECTS scale is used on a residual basis for the conversion of the grades obtained at institutions that have not yet adopted the ECTS tables, but only the scale.

Please note that the ECTS scale allows the transfer of votes only among universities of countries belonging to the European Higher Education Area that have adopted the same ECTS scale. It also should not be confused with other grading scales expressed in letters of the alphabet.

2) Marks obtained in core subjects, according to one's personal curriculum: max 30 points

Subjects:

- A) *for all candidates:* Mathematics, Statistics, Physics
- B1) *for candidates holding degrees in Biology, Biotechnology, Medicine, Pharmacy, Chemistry, Agricultural Science, Veterinary Medicine*: Chemistry, Biochemistry, Molecular and Cellular Biology
- B2) *for candidates holding degrees in Informatics, Engineering, Physics, Mathematics:* Programming, Calculus, Algorithms

The Board will take into account up to four exams taken in the afore-mentioned subjects, of which at least two in subjects belonging to Category A)
Marks equal to 30 cum laude (ECTS A): 8 points
Marks from 28 to 30 (ECTS B): from 6 to 7 points
Marks from 25 to 27 (ECTS B): from 4 to 5 points
Marks up to 22 (ECTS C): from 0 to 3 points

3) Other qualifications: max 30 points

The Board will assess all candidates with a score up to 100 points.
   a) Candidates who obtain a **score ≥ 90 and have submitted their B2 English Language** are admitted to the Degree Programme and can enroll. Candidates who got a score ≥ 90 but do not have a B2 English Language Certificate must undergo an interview according to what establish in point b)
   b) Candidates who obtain a **score ≥ 60** must undergo an interview on the topics listed below.

At the end of the interviews the Board will publish the list of admitted candidates. Those candidates can enroll in the Degree Programme.

   c) Candidates who score **less than 60 points** cannot enroll in the Degree Programme.

All candidates will receive a communication through Studenti Online that will notify them if: regarding the score obtained in the evaluation and if:
   1) **they are directly admitted to enrolment;**
   2) **they need to undergo an interview;**
   3) **they are not admitted to the programme.**

ORAL TEST
Oral tests will be held in English though *Microsoft Teams*, on a videocall. Candidates must download the app here: https://www.microsoft.com/it-it/microsoft-365/microsoft-teams/download-app and register using their institutional e-mail address (name.surname@studio.unibo.it).

Candidates who are admitted to the oral test will receive the link through which they must connect to Microsoft Teams to take the oral test. The Board will try to contact candidates up to three times: in case candidates do not answer, they will be considered as absent.

The Board will check the identity of each candidate: the test will be public.

All candidates are required to be present for the whole duration of the oral tests. Candidates are advised to check Studenti Online (www.studenti.unibo.it) and their institutional e-mail (name.surname@studio.unibo.it) regularly.

If, for any reason, the Board shall use a different videocall tool to get in touch with candidates, they will communicate to candidates all changes.

The oral test will consist in a short exposition on the thesis work, presented or to be presented for the Bachelor's graduation, and questions aiming at assessing knowledge and competence in
A) Mathematics, Statistics and Physics
for all students
B1) Chemistry, Biochemistry, Molecular and Cellular Biology
for students coming from bachelor's in Biology, Biotechnology, Medicine, Pharmacy, Chemistry, Agriculture and Food Science, Veterinary
B2) Computational science
for students coming from bachelor's in Computer science, Engineering, Physics, or Mathematics

The topics are the ones you can find in the following Syllabus:

A)   MATHEMATICS, STATISTICS AND PHYSICS (common to all backgrounds)
1.   Logic and set theory
2.   Number theory: integer, rational, real and complex numbers.
3.   Exponential and Logarithmic Functions. Trigonometric Functions.
4.   Derivatives and integrals of functions in 1 dimension
5.   Partial derivatives and gradient of functions in more than 1 dimension
6.   Complex numbers
7.   Vectors, matrices and operations in vector spaces. Matrix invertibility. Determinants. Eigenvalues and Eigenvectors.
8.   Probability, Conditional probability, Bayes rule
9.   Distributions: Normal, Binomial, Poisson. Mean and Variance
10.   Systematic Errors, Casual Fluctuations. Significant Figures and Scientific Notation. Absolute and Relative Error. Mean, Median and Standard Deviation
11.   Statistical test. Significance, p-value
12.   Fundamental forces, with focus on Electromagnetism
13.   Classical dynamics
14.   Thermodynamics. Enthalpy, Entropy, Free energy.
15.   Atoms and subatomic structure
16.   Waves

B1) CHEMISTRY, BIOCHEMISTRY, MOLECULAR AND CELLULAR BIOLOGY (bachelor's in Biology, Biotechnology, Medicine, Pharmacy, Chemistry, Agriculture and Food Science, Veterinary)
1.   Covalent bond, Molecules and electron density distribution.
2.   Molecular Interactions: Electrostatic force, Van der Waals force, hydrogen bond
3.   pH, Isoelectric Point, Acids and Bases.
4.   Biological macromolecules: Structure and functions
5.   Biological Membranes: Structure and Main Functions

6.   Kinetics. Reaction Rate. Catalysis
7.   Prokaryotic and Eukaryotic Cells
8.   Organization of Eukaryotic Cells, Structure and Functions of the Main Cellular Organelles
9.   Mitosis and Meiosis
10.   Genetic Information Flow and Central Dogma
11.   Genetic Code, tRNA and Ribosomes Structure and Functions, Protein Synthesis
12.   Regulation of gene transcription in Prokaryotes and Eukaryotes
13.   Alleles, Genotype and Phenotype
14.   Structure/Organization of Chromatin and Epigenetics

B2) COMPUTATIONAL SCIENCE (bachelor's in Computer science, Engineering, Physics, or Mathematics)
1.   Basics of computer architecture
2.   Operating systems
3.   Structured programming
4.   Object-oriented programming.
5.   Algorithms and their complexity.
6.   Scientific computing
7.   Databases
8.   Computer networks

Disabled candidates and candidates with learning disabilities

Candidates who want to request any adjustment they may need for the oral test, must submit their request while registering to the selection, according to the following procedure:
1. Access Studenti Online (www.studenti.unibo.it);
2. Fill in the specific form *Request for Adaptation*, save it as a PDF Document and upload it in the dedicated section;
    Adaptation may consist in:
    o   +30% or 50% of time;
    o   Possibility to use specific tools, such as non-scientific calculators. The complete list can be found in the form.
3. Attach the **necessary and specialized documentation.**

Disabled candidates living outside of Italy must upload the legalized certificate of their Disability Status, together with an official translation either in Italian or English.

For more information:
e-mail: abis.adattamentiammissione@unibo.it
tel: +39 366 5772027 OR +39 339 7344468.

EU candidates and candidates with an equivalent status (EU assimilated)

-       EU-candidates are citizens holding any of the nationalities of the Member States
-       Candidates with an equivalent status to the EU candidates (EU assimilated): please, visit the International Desk website

Non-EU candidates living outside of Italy

For the A.Y. 2020/2021 there are **15 available positions** for Non-EU candidates living outside of Italy.

Non-EU candidates living outside of Italy are foreign citizens from states not belonging to the European Union who are resident abroad at the time of applying for university admission and who are not legally classified as equivalent to Italian/European citizens.

Non-EU candidates may apply at the first intake on the basis of the scheduled deadline (see the schedule above). Non-EU candidates have to comply with the provisions of the Italian Minister of Foreign Affairs (http://www.studiare-in-italia.it/studentistranieri/index.html).

The Admission Board will produce a ranking of non-EU candidates living outside of Italy, ordered from the highest to the lowest score. The best 15 students in the ranking will be able to enrol in the Degree Programme (provided that they comply with the pre-enrolment procedure in the Italian Embassy/Consulate in their country).
Non-EU candidates' final admission to Bioinformatics is subject to the rules foreseen by the Italian Government and the Ministry of University and Education.

4. Students with Non-Italian Degrees

If you hold a non-Italian Degree, it needs to be **legalized, officially translated, validated and accompanied by a suitable "Declaration of Value"** (*Dichiarazione di Valore*) confirming the eligibility to enroll in the Degree Programme. You can take part in the selection even though you do not have all the needed documents yet, but if you are eventually admitted to the programme, you will need them in order to finalize your enrolment.

LEGALIZATION
Foreign qualifications have no legal validity in Italy; therefore, they must be legalized in order to guarantee their authenticity. Ask the relevant authority to legalize the documents that attest your degree before going to the Italian Embassy/Consulate.
Legalization is not required if the country where the qualification was obtained is part of The Hague Convention (1961). In this case, legalization is substituted with an "**Apostille**". Nor is legalization required if your qualification was awarded by an institution in Belgium, Denmark, France, Ireland or Latvia (Brussels Convention, 1987), Germany (Rome Convention 1969), Austria (Vienna Convention 1975).

TRANSLATION
Your final Degree and all other relevant documents must be admitted along with an official translation in Italian, obtained from the Italian Embassy. If you are in Italy, you can get your

documents translated by official translators (*traduzione giurata*), at district court offices (*Tribunali*). Please note: The University of Bologna does not require a translation for diplomas, certificates and syllabuses that are issued in English, French, German or Spanish. However, some Embassies or Consulates may ask you to have such documents translated into Italian anyway to release a VISA.

DECLARATION OF VALUE

The Declaration of Value (*Dichiarazione di Valore*) is an official document describing the characteristics of a given qualification obtained within an education system other than the Italian System. It is used by the competent University offices to assess qualifications for the purposes of admission.

The Embassy where you apply for the VISA may or may not be the same that will release you the DoV. This is because the DoV is issued by the Italian Embassy **in the country related to the school system** (which means, for example, that if you are in Kenya and graduated from a British School in Kenya, you need to request the DoV to the Italian General Consulate in London). If your diploma needs to be legalized (see above), the Italian Embassy in charge will issue the DoV only after the qualification has been legalized by the competent authorities in that country (for further information visit the MIUR Website).

When needed, the declaration of value can also be substituted by attestations issued by ENIC-NARIC centres that contain all the information given in the Declaration of Value, which are necessary for the evaluation of the degree.

What to do

You should contact the Italian Embassy/Consulate in your country of reference, and provide them with:

❖ The original of your Degree
❖ Your legalized documents, if applicable (see "legalization" above)
❖ *(Only if you are a non-EU student resident outside of Italy)*   Two passport-size photos
❖ *(Only if you are a non-EU student resident outside of Italy)*   The application for pre-enrolment (Form A): ask for it at the Italian Consulate/Embassy in your country of residence. Please ask the Embassy/Consulate about this as soon as possible for information and guidance.
❖ *(Only if you are a non-EU student resident outside of Italy)*   Health insurance policy (if requested) and the documents required for the visa application (see 9.2)

The Embassy/Consulate must issue with:

❖   the Declaration of Value of your qualification (if applicable, see above)

❖   *(Only for non-EU students living outside of Italy)*

- One of the passport-size photo you brought, authenticated
- The application form for pre-enrolment (Form A), authenticated
- a stamped health insurance policy (where applicable)
- An entry visa to Italy for study purposes (see par. 9.2).

If you are interested in applying for Er.Go. financial aid, (study grants, housing and tuition fee waivers), you must obtain a certification attesting to your **family's income and assets from the Italian Embassy**, which has to be translated and legalized. Er.Go. calls for applications will be published in summer 2020.

Visa and rules for residence in Italy

EU and EU-assimilated

If you have been living in Italy for more than 3 months, it is a good idea to register with the Registry office (Anagrafe) in the city you live and study in: Bologna, Cesena, Forlì, Rimini or Ravenna (however, not all municipalities require such registration).

Non- EU

If you are a non-EU citizen, you are required to apply for a **student visa** at the Italian Embassy or Consulate in your country of citizenship or residence. Such visa (*Visto D: studio/ immatricolazione università*) is typically issued **after** the pre-enrolment procedures have been completed, and when you have proof of having been admitted to a degree programme.

Read the information about the visa for Italy here http://vistoperitalia.esteri.it/home/en, selecting "study –

university enrolment" as the reason for your stay. Contact the relevant Italian Embassy well in advance and find out what documents are required. Make an appointment if necessary.

Important: an entry visa for tourism cannot be used to enroll at the university or to obtain a residence permit for study purposes.

Before leaving, you will need to purchase health insurance in your own country (which must be valid in Italy and cover illnesses, accidents and maternity). Take the policy documentation with you to the embassy together with the other documents required for obtaining a visa and make sure that the embassy stamps the insurance policy to certify its validity. Without the embassy's stamp, once you arrive in Italy you may be obliged to purchase another policy, as foreign insurance not validated by the Embassy is not acceptable for obtaining a residence permit.

Once in Italy, all non-EU citizens who hold a valid and correct type of student visa for Italy must apply for a **permit of stay for study purposes** (*Permesso di soggiorno per motivi di studio*). The permit of stay (aka "residence permit") is issued by the local Police Department (*Questura - Ufficio Stranieri*) in the place where you live in Italy; however, the applicant must physically submit his/her application not directly to the Police, but at the Post Office.

N.B. info is available at this link: https://www.unibo.it/en/teaching/enrolment-transfer-and-final-examination/visa-and-rules-for-residence-in-italy/residence-permit-1.

Useful links

4. **Declaration of Value, Legalization and Translation of Documents:**
   https://www.unibo.it/en/teaching/enrolment-transfer-and-final-examination/declaration-of-value-translation-and-legalization
5. **Unibo for Refugees:**
   https://www.unibo.it/en/services-and-opportunities/study-grants-and-subsidies/exemptions-and-incentives/unibo-for-refugees

VERY IMPORTANT: Students are admitted to enrolment conditionally on the legal validity of their first degree, which is officially declared by the Italian Authorities in the country where it was awarded, and on the possession of a visa for study reasons. Therefore, enrolment is subject to the full compliance of the above procedure.

7. Enrolment

Admitted candidates must enroll before **26th November 2020**. You must:

1) **Login** on www.studenti.unibo.it with your personal username and password and select "Registration" > "Second-cycle degree programme" > "Bioinformatics";
2) **Insert** the requested information and upload a JPG file of your passport-size photo (beware of the consequences under art. 496 of Italian Criminal Code regarding false declarations: in such case, you are punishable by law, will be not enrolled, and will lose any right to benefits or reimbursements);
3) **Pay** the first instalment – or the total amount – of Genomics tuition fees. Payment modes other than those indicated at this link https://www.unibo.it/en/teaching/enrolment-transfer-and-final-examination/tuition-fees-and-exemptions will not be accepted.

From June 2020, if you have **SPID Credentials** and use them to enroll, after paying the fee your university career will be automatically activated. If you are a student belonging to the categories in points b), c) and d) here below, before activating your career the University of Bologna must verify your documents even if you have SPID Credentials.

If you **do not have SPID Credentials**, in order to activate your career you must be identified according to the modalities that you will find on Studenti Online www.studenti.unibo.it, in your application.

Once done this, if you have a previous career in Unibo, your enrolment in Bioinformatics will be directly activated.

Once your career is activated you can access Unibo services, such as study plans submission, exams booking, Wi-Fi, online libraries: you will also receive an e-mail to print your Badge, according to the modalities that will be specified within.
If you do not activate you career you cannot use Unibo services!

In the following cases there are specific information on enrolment:
a) **Students with disabilities:** www.unibo.it/it/servizi-e-opportunita/borse-di-studio-e-agevolazioni/esoneri-e-incentivi/esenzioni-per-studenti-portatori-di-handicap. When you enroll, you must send your disability certificate via mail to the Students Administration Office of Pharmacy, Biotechnology and Sport Science segfarbiomot@unibo.it using your institutional e-mail (name.surname@studio.unibo.it);
b) **If you are a EU-assimilated student,** you have to send the copy of your residence permit to the Students Administration Office;
c) **If you are a non-EU citizen living outside of Italy,** you have to send the copy of your residence permit or the copy of the receipt, attesting the request has been forwarded. More info here;
d) **If you have a foreign qualification.** You must check the information available here and send the documentation related to you degree to the Students Administration Office.

You must activate your career before 26th February 2021, otherwise your enrolment will no longer be valid.

You can enrol in the Programme even if you have not obtained you First-Cycle Degree yet, but this must be obtained before 26th November 2020 (otherwise your enrolment will be automatically withdrawn).

- **Tuition fees information** at this link:
   https://www.unibo.it/en/teaching/enrolment-transfer-and-final-examination/tuition-fees-and-exemptions/tuition-fees (the exact amount of Bioinformatics tuition fees will be confirmed by the academic bodies. Just for reference, 2019/2020 annual tuition fees were € 3825 per year)
- Information on **study grants, services and opportunities**:
   https://www.unibo.it/en/services-and-opportunities

Courses will begin in October 2020.

8. Contacts

Information Notices for students of the University of Bologna and for users intending to enrol in a study programme are available here: www.unibo.it/PrivacyBandiCds

Office in charge of the enrolment procedure:
Segreteria Studenti Farmacia, Biotecnologie e Scienze Motorie
email segfarbiomot@unibo.it
check this page for any information

For more info and support on selections
Programme Director
Prof. Pier Luigi Martelli
e-mail: farbiomot.bioinformatics@unibo.it

For technical support on the application website
Tel. +39 0512099882
e-mail: help.studentionline@unibo.it

For info on foreign qualifications and visas
email: internationaldesk@unibo.it
Phone: +39 051 2088101
(During Covid-19 Emergency, please call +39 051 2099507)