



UNIVERSITÀ DI PISA



N°2023-14169

**AGREEMENT TO ESTABLISH
A DOUBLE MASTER'S DEGREE PROGRAMME**

between

University of Pisa

(PISA, ITALY)

and

Aix-Marseille Université

(FRANCE)

Agreement establishing a double-degree program between 2 partners of the consortium agreement of the European Project “Advanced Digital Skills AI and Health”

University of Pisa,
Lungarno Pacinotti 43, 56126 Pisa, Italy

And more specifically:
The Department of Biology

Represented by:

Prof. Riccardo Zucchi, Rector of the University of Pisa,

Hereafter referred to as “UNIFI”

Having regard to the DM 270/2004 (revision of act DM 509/1999) of the Ministry for Education, University, and Research, that allows Italian Universities to independently develop their own curricula (according to law 341 of 19-11-1990, Art.11);

Having regard to the decree MIUR 270/2004 "Regolamento recante norme concernenti l'autonomia degli Atenei" which allows Italian universities to grant degrees in partnership with other Italian or foreign universities;

Having regard to Decree MIUR 987/2016 of December 12, 2016 on "Self-evaluation, evaluation, initial accreditation and re-accreditation of curricula and courses" and related amendments

Having regard to the UNIFI regulations

On one hand

and

Aix-Marseille Université (AMU)
Public Higher Education Institution of scientific, cultural and professional character
SIRET : 130 015 332 00013/ Code APE 85.42Z Higher Education
Jardin du Pharo, 58, Boulevard Charles Livon, 13284 Marseille cedex 07
And more specifically:
Faculty of Medical and Paramedical Sciences

Represented by:

Prof. Eric BERTON, President of Aix-Marseille Université authorized to approve this agreement by the Board of the University on January 9, 2024.

Hereafter named “AMU”.

Having regard to articles D 163-17 to D 613-25 of the Education Code;

Having regard to the decree of July 12, 2021 accrediting Aix-Marseille Université for issuing national diplomas and certain State diplomas as a higher education institution under the authority of the Ministry of Higher Education, Research and Innovation;

Having regard to the circular n°2019-134 of September 25, 2019 relating to the procedures for the elaboration and delivery of national diplomas and certain State diplomas by higher education institutions under the authority of the Ministry of Higher Education, Research and Innovation;

Having regard to the decision taken by the Board of Directors of Aix-Marseille Université on 25 November 2022 approving, after a positive outcome of the CFVU on 10 November 2021, the Charter of the "Diplomas in international partnership at Aix-Marseille Université – double-degrees, joint degrees, delocalized training";

Having regard to the procedures the assessment within the framework of the Master's degree programs Biology Health duly approved by AMU for the year under consideration;

On the other hand
collectively referred to as the **Parties**, have agreed as follows:

Article 1 – Subject of the Agreement

Both Parties

- Considering the efforts to harmonize higher education and to establish international curricula that foster an international labour market as well as improve student mobility;
- Recognizing the benefit of common and complementary aspects of their mutual educational offers and seeking to strengthen their international activities;
- Aiming at the establishment of a double degree involving a student's working for two university degrees in parallel at different institutions (hereinafter referred to as the double-degree Programme)

approve the text of this Agreement, and undertake to award the following diplomas to the students who have completed the course of the Programme:

- **Laurea Magistrale LM-9 in "Biotechnologies and Applied Artificial Intelligence for Health"** (120 ECTS), delivered by the Department of Biology of the **University of Pisa**,
- **The Master's Programme in Health and Biology (« Master Biologie Santé »), specialization AI and biomarkers (« Parcours Intelligence Artificielle et Biomarqueurs »)** (120 ECTS) delivered by the Faculty of Medical and Paramedical Sciences of **Aix-Marseille Université**.

The University of Pisa and Aix-Marseille Université agree to collaborate on issues of mutual concern to set up a 2-year Master's degree programme named *Master Degree in AI and Health* starting from the academic year 2023/2024. This programme is based on the Italian LM-9 Biotechnologie Mediche, Veterinarie e Farmaceutiche and leads to the award of a double-degree.

The objective is to enhance students' competences and provide a high-level of knowledge and methodology to foster the use of AI applications in Health and its new developments. After completing this Master's degree program, students get skills in AI methods and tools for Big Data in Health, including data collection, storage and processing, analysis of big data and application in health.

Both Parties will jointly collaborate, independently and collectively, to create this double-degree programme. They undertake to facilitate the identification of funding opportunity in the field of education and comply with the regulations of each country concerned (for example, the Call for proposals of Vinci Programme (French-Italian University) for bi-national Master's course).

Article 2 - Programme Administration

2.1 Each Party will appoint a program coordinator (see Art. 15).

2.2 Each Party agrees:

- to participate in a cooperative manner in the meetings of the different bodies under this Agreement;

- to promptly notify any delay in performance or any event that may impact the Program to the appropriate body;
- to inform the appropriate body of relevant communications it receives from the third parties in relation to the Program;
- to ensure the accuracy of all information it supplies to other partners and to promptly correct every error which has been notified, whereas the recipient partners shall be responsible for the use made of such information;
- to act at all times in good faith and in a manner that reflects the good name, goodwill and reputation of other partners and in accordance with good business ethics.

2.3 Each Party will be responsible for covering its own expenses associated with this Inter-Institutional Agreement. No university will have the authority to authorize or incur financial liability on behalf of the other.

2.4 Due consideration should be given to the opportunities offered by national and international scholarship programmes, in order to fund scholarships for students and staff mobility, in addition to the funds already available for this double-degree (see art. 8).

Article 3

Administrative Headquarters

3.1 Both Parties agree to refer to the administrative headquarters of Aix-Marseille Université and University of Pisa to successfully implement the double-degree Programme *Master AI and Health*. By assuming this role, Aix-Marseille Université and the University of Pisa agree to:

- a) make available its own offices in order to provide the necessary technical-administrative support to start the double-degree Programme;
- b) define all administrative aspects related to the admission procedure, enrolment, registration renewal and all other requirements that are part of student's formalities and university career;
- c) promote the Programme and its achievements to key stakeholders;
- d) supervise the publication of the "competition announcement" for the selection of candidates.
The announcement specifies all necessary requirements the student must meet in order to be eligible to take the admission exam;
- e) manage the relationship with the competent Ministry.

3.2 The students' original documents will be kept by the administrative headquarter of the student's home university. It will be its responsibility to communicate all necessary information to the partner Universities in order to manage the student's academic careers.

Art. 4

Course Organization

4.1 The AMU/UNIPi Local Examination Committee is responsible for the Master's degree programme and it consists of the Coordinators and the Board of each specific degree program. The procedure to elect the Coordinators, the composition of the Board and their respective functions are those provided by the Statute and the current regulations of UNIPi and AMU.

1. Coordinator

Each Party will nominate a permanent staff member at its Department or Faculty who shall act as contact person for all matters concerning the double-degree studies.

2. AMU/UNIP I Local Examination Committee

The Parties shall appoint a Local Examination Committee which:

- sets admission quotas for the double-degree studies
- decides upon the distribution of scholarships,
- decides upon the distribution of subsidies,
- is responsible for the quality assurance of the double-degree studies,
- liaises with the relevant bodies of each partner institution in accordance with article 5.2, particularly as regards approval of changes to the course list in the appendix,
- takes care of student evaluation and overall evaluation of the double-degree studies,
- gives recommendations for improvement of the double-degree studies.

The AMU/UNIP I Local Examination Committee consists of 2 persons from each party (the Director, or the Deputy Director or a representative of the 2 Master's degree programmes concerned)

Article 5 - Teaching Programme

5.1 The course curriculum of this double-degree Programme can be found in the appendix, which is an integral part of this Agreement. Students participating in the double-degree programme will attend their first and second semester in their home university and third and fourth semester in the host institution, according to table 1 (AMU students) and table 2 (UNIP I students).

During the 4th semester of the Master's degree programme, AMU students carry out an experimental internship equivalent at 30 ECTS. It can take the form of an internship + a Master's thesis with Focused Lab Training courses performed at the laboratories of the Department of Biology, Department of Information Engineering and Department of Computer Sciences of UNIP I, as well as in research centres or in research and development departments of private companies. The internship activity consists in the production of a research master's thesis (27 ECTS) regarding an original experimental work (see Table 1 in the Appendix).

During the 4th semester of the Master's degree programme, UNIP I students carry out their Master's thesis work (30 ECTS) at AMU under the supervision of an advisor from AMU. The students present their final Master's thesis at AMU (see Table 2 in the Appendix). The internship activity consists in the production of a research master's thesis (30 ECTS) regarding an original experimental work (see Table 2 in the Appendix).

Within the double-degree programme, AMU/UNIP I students will present the original thesis experimental work to the AMU/UNIP I Local Examination Committee.

The students will defend their master's thesis in front of the Master's Thesis Examination Board (see art. 12) of their home university. When possible, examiners from the partner university of the double- degree as well as examiners from project AI and Health could join the Board. The graduation ceremony calendar will be defined by the Master's Thesis Examination Board at least twice a year, according to the regulations of each university.

5.2 The modifications of the curricula of the Master's degree programme at the partner universities, made within the framework of the annual campaign to modify the matrix courses

for national degrees, should be reciprocally communicated among the partners to verify the compliance with the double-degree Programme. Such modifications, if any, should be:

- approved by the Board of the Faculty, then submitted to the Council for Academic Affairs (CFVU) for examination and to the Board of Directors (CA) at AMU
- approved by the Course of Study Council and the Department of Biology, then submitted to Academic Senate and Board of Directors at UNIPI, for approval.

Changes to the Annex agreed by the Parties do not affect the whole agreement.

5.3 The two Parties share the organization and the management of this double-degree programme, which can be updated through bilateral mutual agreement.

Article 6 – Double-degree admission and students' mobility requirements and procedures

6.1 The terms and procedures for the admission of students interested in applying in the Master's degree programme at each partner university are defined and managed by the administrative headquarters. At AMU, Master 1 applications are submitted on the platforms "monmaster" and "Etudes en France". At UNIPI, call for application for non-EU students are scheduled as follows: <https://www.biologia.unipi.it/admission-wbh-lm.html>

6.2 The signing Parties will ensure provision of the required number of places, while following the principle of parity. Both Parties will jointly determine the number of students participating in the double-degree Programme on a yearly basis during the period between January and April. The Parties agree to set the number of students at a maximum of 50.

6.3 Each Party jointly selects and confirms the acceptance of the students in the double-degree programme.

6.4 The Programme coordinator of each Party is responsible for giving advice to prospective students. The selection procedure is based on the following criteria:

- UNIPI/AMU students must have successfully completed a Bachelor's Degree (180 ECTS) according to the regulations of each Master's degree of the double-degree programme (listed in art. 1). Candidates from AMU must have a Bachelor degree in biology or equivalent, or be in Medical or Pharmaceutical residency. For the partner universities, candidates must hold a Bachelor degree in biology, biotechnologies or equivalent, a Bachelor of computer sciences, engineering or equivalent or be medical or pharmaceutical residency
- UNIPI/AMU students must have been selected by their home university to participate in this double-degree Programme.
- the students must demonstrate their English proficiency (level B2 and higher).

6.5 The Programme Coordinator of each Party will inform the partner about the selected students immediately after the selection process has been completed. The selection of candidates is based on transcript records, a letter of motivation and an interview, if necessary.

6.6 Students enrolled at UNIPI have to apply for admission in the double-degree programme at AMU, before being officially accepted in mobility at the partner institution. During their first

year of the Master's degree course, UNIPi students must acquire a minimum of 30 ECTS credits including at least the following mandatory exams: Artificial Intelligence I (6 ECTS), Advanced Biochemistry (6 ECTS), Artificial Intelligence II (6 ECTS), Physio-pathology (6 ECTS).

At the time of application, students are also required to enclose a *preliminary agreement* before establishing the student's scholarships for work placement at Marseille. This agreement defines the supervisor identity for the internship scheduled in the 4th semester.

6.7 Students enrolled at AMU have to apply for admission in the double-degree programme at UNIPi, before being officially accepted in mobility at the partner institution. During their first year of the Master's degree course, AMU students must acquire 60 ECTS at AMU, including 18 ECTS corresponding to courses taken remotely: Artificial Intelligence I (taken from UNIPi – 6 ECTS), supplementary courses in Computer and programming for data Systems Sciences (taken from Stockholm University – 12 ECTS). For each of these courses, the student must obtain a minimum passing grade (10/20).

At the time of application, students are also required to enclose a *preliminary agreement*, before establishing the student's scholarships for work placement at Pisa. This agreement defines the supervisor identity for the internship scheduled in the 4th semester.

Article 7 - Tuition Fees

7.1 For each academic year of the double-degree programme, students will register and pay tuition fees at their home institution. They will register additionally as fee waiver at the host institution during their mobility, without paying tuition fees and according to its rules and procedures. The host institution may nonetheless require insurance and administrative fees for the edition of the diplomas.

7.2 AMU students admitted by the University of Pisa under this agreement will have to pay the compulsory annual Regional Tax (Tassa Regionale per il Diritto allo Studio). Further information is available on this weblink:

<https://www.unipi.it/index.php/tuition-fees-and-financial-support/item/13589-tuition-fees-reduction>

Article 8 – Financial Plan

8.1 In addition to the payment of student's registration and tuition fees, the activities of the double-degree Programme are co-financed by

- EU Project "AI and Health" (Project Nr. 101083880, Call Advanced Digital Skills: DIGITAL-2021-SKILLS-01-SPECIALISED), which includes complementary co-funding by providing scholarships for student mobility for placement.
- Erasmus + programme 2021-2027 KA131 – Erasmus Mobility

It is possible, however, that each partner university may obtain further funding from external public or private entities on the basis of specific agreements.

8.2 The use of the funds is under the responsibility of each Party. It is performed according to its own regulations, the Parties agree to allocate in a fully open, and transparent manner grants and scholarships to students enrolled in the double-degree programme.

8.3 The implementation of the double-degree Programme does not hold the partner universities liable for any financial burden nor any other obligations, except for those stated in this Agreement and those provided in the Grant Agreement of the EU project “Advanced Digital Skills AI and Health”.

Art 9 – Academic staff (Professor and university lecturers)

9.1 The partner universities ensure proper running of the double-degree Programme by making possible the teaching activities of the academic staff and researchers for this purpose. The minimum number of academic staff should be sufficient to open the Master’s degree Programme at each Party, in accordance with the enforced law and regulation.

9.2 The teaching and research staff are able to get access to the partner’s sites to provide courses and trainings, coaching and mentoring activities, to participate in seminars, examination boards, research and meetings to plan, evaluate or develop student exchange programs.

Article 10 - Student Enrolment, Credit Recognition and Transfer

10.1 Each Party will keep records of the students enrolled in the Programme and provide all students and partners with the official transcript of records.

10.2 The successfully completed courses and credits obtained at the host university during the mobility period will be transferred to the home university according to the double-degree study programme. The two partners teach the Master courses exclusively in English. An annual meeting will be held to maintain coherence within the programme between the two universities.

10.3 Students attend the courses and other academic activities scheduled in the programme. They take the relevant examinations. They must comply with the procedures and regulations of their host institution during their mobility (i.e: student assessment procedures and examination).

10.4 Transferring credits between the Parties will be made by using the ECTS system as described in Table 3 in the Appendix.

10.5 The ECTS transferred between the Parties must have a minimum passing grade or an equivalent (see Table 4).

10.6 The records will be given to the host institution as soon as the grades in the home institution are posted.

Article 11 - Diplomas

11.1 Upon successful completion of the double-degree Programme requirements (120 ECTS), two separate diplomas are awarded to the students in accordance with the law enforced in France and Italy:

- **The Master's Programme in Health and Biology (« Master Biologie Santé »), specialization AI and biomarkers (« Parcours Intelligence Artificielle et Biomarqueurs »)** (120 ECTS) delivered by the Faculty of Medical and Paramedical

Sciences of **Aix-Marseille Université**, and the Diploma Supplement defining more precisely what is taught under the main national course.

- **Laurea Magistrale LM-9 in “Biotechnologies and Applied Artificial Intelligence for Health”**, delivered by the Department of Biology of the University of Pisa, and the Diploma Supplement, defining more precisely what is taught under the main national course.

The diploma parchment issuing by each Party will contain its own details: the qualification, which corresponds to the combined programme according to the regulations of the local university, the signature of the Rector, its logo, and whenever possible, an explicit reference to this agreement.

11.2 These degrees are recognized in Europe as research Master's degrees allowing the student to start a Ph.D. Programme.

11.3 The two universities will decide whether or not to deliver their respective diploma and which grade will be given, according to the following principles:

- Regarding the acquisition of credits and exemptions, both universities will apply the rules and regulations of the university where the students have attended courses. All credits that are not obtained according to these rules and the examinations associated to these credits, should therefore be taken again at the university where the students have attended courses.
- Only students who have met all requirements of both universities can receive the double-degree. Each university determines, in accordance with its own rules, which grade will be given to the student. The marks obtained in one university might be converted by the other university in accordance to the conversion table mentioned in annexes.
- Students who don't meet the conditions set out in the above-mentioned paragraphs may, under conditions determined by their home university, cancel their participation to the double-degree programme and be reintegrated in the normal study programme of their home institution.
- Both universities commit themselves to inform students enrolled in the double-degree programme in due time about the deliberation rules that will apply to them and about possible exemptions.

Article 12 – Thesis: Evaluation, Composition of the Master's Thesis Examination Board and Transfer of Documents

12.1 The final thesis at the end of the second year must be presented and discussed as indicated in Article 5. Each Party (UNIFI/ AMU) will appoint a Master's Thesis Examination Board according to the regulations enforced in each of the Parties. The Master's Thesis Examination Board will assess the final thesis according to the regulations of the student's home university.

12.2. Students have to write the final thesis in English. A copy of the final thesis will be submitted to the Parties.

12.3 The partners agree to recognize the thesis done at UNIFI and AMU. They accept the results of examinations and the grades (according to Table 5).

12.4 Both Parties commit themselves to communicate all marks obtained by the students enrolled in the double-degree Programme as soon as possible in order to allow the Master's Thesis Examination Board to organize deliberations in due time.

Article 13 - Students' Right and Duties

13.1 Each student will be enrolled at the home institution while he/she is registered at the host institution for the mobility period.

13.2 Students enrolled in the double-degree Programme:

- are responsible for the payment of the university tuition fees according to the regulations of their home university. AMU students will have to pay Regional tax to UNIPI.
- have the right to be eligible for any reductions due to their economic situation or merit according to the regulations of the student's home university;
- should have a valid insurance against accidents they may occur during their stay at the partner university;
- should be insured against civil liability for damages they may inadvertently cause to third parties;
- can have access to all services offered by the partner university (scholarships, university restaurants, accommodation) during their stay at the two universities;
- are obliged to respect the current regulations of the partner university regarding the use of equipment and attendance of the university's facilities.

13.3 Students are granted full access to both Parties' facilities (such as libraries, laboratories, etc.) during their studies. The law and regulations of each Party regulate health insurance. In addition, students must take out insurance to cover medical expenses and international repatriation to meet regulatory compliance.

13.4 During the exchange period in the host institution, the students shall comply with its internal regulations.

13.5 At the host institution, students shall be allowed to do the following:

- attending classes and take the corresponding examinations at the end of the course units;
- undertaking research within the preparation of the Master's final thesis;
- engaging in a traineeship when scheduled in the course curriculum.

Art. 14 - Evaluation and monitoring of the activities

14.1 The partner universities will consult each other whenever they deem it appropriate, committing to jointly assess, at least once a year, the quality and development of the programme (using, when appropriate, the Quality Assurance methodology proposed at the European level, and according to the procedures indicated in EU Project "AI and Health" Nr. 101083880.

Article 15 - Contact Persons / Programme Coordinators

15.1 Each Party appoints a programme coordinator who will be in charge of the administrative supervision of this Agreement and who will be the contact person for **UNIFI** and **AMU** students, who are participating in this double-degree Programme.

15.2 The Contact Person / Programme coordinator for each university is:

Departmental coordinator from AMU:

Christophe Dubois

Professor in Cell Biology. Program director for the joint Master of Biology and Health

Email Address: christophe.dubois@univ-amu.fr

Phone: +33 4 91 83 55 61

Contact person from AMU:

Christel DUPONT-FERRIER

Project and strategic network manager International relations office

Email Address: christel.dupont-ferrier@univ-amu.fr

Phone: +33 4 13 55 38 51

Programme coordinator from UNIFI:

Prof. Arianna Tavanti

President of the Programmes in Biotechnologies

Email Address: arianna.tavanti@unipi.it

Phone: +39 050 2213697

Contact person from UNIFI:

Prof. Roberto Giovannoni

Coordinator of the Master's degree course in Biotechnologies and Applied Artificial Intelligence for Health

Email Address: Roberto.giovannoni@unipi.it

Phone: +39 050 2211505

Article 16 - Duration and Renewal

The Agreement will be effective from the academic year 2023/2024 till the end of the academic year 2026/2027. The Parties may renew it, in writing, for an equal period, six months prior each expiration date unless either Party provides written notice to terminate the Agreement six months prior to the expiration date.

In accordance with the decision taken on 12 July 2021 by the French Ministry of Higher Education, Research and Innovation, the accreditation of Aix-Marseille Université is given until the end of the academic year 2023/2024. Beyond this date, Aix-Marseille Université will require a new accreditation.

In accordance with the decision taken on 12 May 2022 by the Agenzia Nazionale di Valutazione del Sistema Universitario e della Ricerca (ANVUR) the accreditation of LM-9 Biotechnologies and Applied Artificial Intelligence for Health Master's degree is given since academic year 2022/2023 until the end of the academic year 2024/2025. Beyond this date, the master's degree will be subjected to the periodical accreditation procedures.

Article 17 - Publicity and Promotional Materials

17.1 Each partner university authorizes the use of its name and logo for purposes related exclusively to this double-degree Programme, in accordance with the charter of each university.

17.2 Except as provided for in the terms of this Agreement, neither Party shall make use of the name of the other Party in any publication, advertisement or news release without prior consultation and written approval.

17.3 Each partner university will publicize the double-degree Programme in its promotional materials (website, brochure) and will provide copies of the materials to the other Party.

Article 18 - Controversies

18.1 The resolution of possible controversies, which may take place in the interpretation and implementation of the present agreement, will be referred to an arbitration board composed of a member appointed by each partner university and one chosen by mutual agreement.

Article 19 – Use of Personal Data

19.1 The Parties agree that they will act as autonomous controllers for the processing of personal data in the context of the implementation of the present agreement.

19.2 Each Party agrees that the personal data will be processed by the host university in accordance with the provisions of this agreement and the national legislation of the country of each university, where the registration is made. The processing of personal data shall be carried out in accordance with the European Union's General Data Protection Regulation (GDPR).

19.3 The students' data being passed will only be used within the framework of this Agreement for the academic and administrative management of the mobilities, for statistical purpose (only internal use), and to protect the personal interests of the data subject.

19.4 The Parties undertake to communicate with the students in a transparent manner on the way they can exercise the rights that are granted to them under the GDPR.

19.5 The Parties will provide the students with the information set out in Articles 13 of the GDPR by including it in this privacy statement. They will be made explicit as follows:

AMU will publish the provisions referred to in this article on:

<https://www.univ-amu.fr/fr/public/donnees-personnelles-et-saisine-du-dpo>

UNIFI will publish the provisions referred to in this article on:

<https://start.unifi.it/wp-content/uploads/2020/02/Informativa-Studenti.pdf>

19.6 The Parties undertake to respect the confidentiality obligation when processing assistance when it is necessary and/or may reasonable be expected to enable them to meet their obligations under the GDPR.

19.7 In the event that a student makes any request regarding his or her personal data to a Party, the responsibility for the execution of such a request lies on the Party receiving the request. The other Party shall assist it in this.

19.8 The Party shall ensure that appropriate technical and organizational measures are taken to protect the personal data against loss or any form of unlawful processing. The measures to be taken, are in line with the available technology.

19.9 In the event that there is an infringement with regard to personal data, the Party who committed the infringement will be responsible for the communication (in any) to the student and, if applicable, to the supervisory authority. The Party will also notify the other Party in writing without unreasonable delay. The Party, who committed the infringement is obliged to respond appropriately at its own expense to stop the infringement and to limit any adverse consequences of the infringement.

Pr. Hervé Isar (dpo@univ-amu.fr) acts as data protection officer on behalf of AMU in the context of this Data Processing Agreement.

Dr. Laura Mazzanti (responsabileprotezionedati@unipi.it) acts as data protection officer on behalf of UNIPI in the context of this Data Processing Agreement.

Article 20 – Termination of the agreement


20.1 Each Party may request the termination of this agreement by registered letter with acknowledgement of receipt, before 31 December of the year before the start of the academic year for which this Party will not participate in the program. Any academic year started must be completed to avoid any prejudice to students.

20.2 Termination will not affect the ongoing exchanges or those already approved prior to the effective date of termination. It will not modify any obligations to be performed regarding the semester of studies planned for the students and the exchanges already agreed upon.

Article 21 – Exceptional health measures

21.1 The Parties undertake to respect the sanitary measures prescribed by the host institution or any other competent authority. Either Party may suspend this Agreement, totally or partially, for any reason related to public health issues that prevent the total or partial execution of this Agreement or that would not allow its execution under the required health conditions.

This Agreement is made in 2 original copies.

For the University of Pisa Rector Riccardo Zucchi 	For Aix-Marseille Université President Eric BERTON
--	--

<p>Pisa, Italy</p> <p>Date: <u>22.12.2023</u></p> <div data-bbox="469 378 576 490" data-label="Image"> </div> <p>UNIVERSITÀ DI PISA</p>	<p>Marseille, France</p> <p>Date: <u>01/02/2024</u></p> <div data-bbox="868 344 1107 557" data-label="Text"> </div> <div data-bbox="1099 311 1315 524" data-label="Image"> </div>
---	---

Appendix

Table 1 - Master program for AMU Students

The course's curriculum of the Master Biology – Health designed with the academic teaching units and their corresponding ECTS credits shall be in accordance with the last amendments made by the Faculty, approved by the Council for Academic Affairs (CFVU) and the Board of Directors at AMU (CA).

	1st Year at AMU	University	Language	Credits
ABSAU09	Basic notions in Biostatistics	AMU	ENGLISH	3
ABSAU02	Ethics and Biomedical research	AMU	ENGLISH	3
ABSAU11	Molecular basis of immune-therapies	AMU	ENGLISH	3
ABSAUIST1	Introduction to Data science	SU	ENGLISH	7,5
ABSAUIST1	Introduction to Programming	SU	ENGLISH	7,5
ABSAUIP11	Artificial Intelligence I	UNIPi	ENGLISH	6
ABSBOT 6 ECTS au choix parmi l'offre d'UE biologie santé	Biological data (acquisition; processing and analysis): basic notions	AMU	ENGLISH	3
	Main data processing tools	AMU	ENGLISH	3
ABSBU02	Training course in a lab for 8 weeks	AMU	ENGLISH	9
ABSBU33	Analysis of data using algorithms	AMU	ENGLISH	3
ABSBUIST1	Natural Language Processing	SU	ENGLISH	6
ABSBUIP11	Artificial Intelligence II	UNIPi	ENGLISH	6
Total Credits 1st Year				60

2nd Year at Pisa	University	Language	Credits
Cell signalling and imaging tools	UNIPi	ENGLISH	6
Bioengineering and Experimental Models in Health and Disease	UNIPi	ENGLISH	6
Omics: Biotechnology and AI for health	UNIPi	ENGLISH	6
Job placement activities	UNIPi	ENGLISH	3
Focused Lab Training	UNIPi	ENGLISH	6
Electives	UNIPi	ENGLISH	6
Internship + Thesis	UNIPi	ENGLISH	27
Total Credits 2nd Year			60

Total credits	120
----------------------	------------

Table 2 – Master program for UNIPi Students

	1st Year at UNIPi	University	Language	Credits
	Artificial Intelligence I (common course)	UNIPi	ENGLISH	6
	Advanced biochemistry (common course)	UNIPi	ENGLISH	6
	Probability and Biostatistics (Biology track)	UNIPi	ENGLISH	6
	Bioinformatics and in silico models (Biology track)	UNIPi	ENGLISH	12
	Biology of Cellular System (Engineering track)	UNIPi	ENGLISH	6
	Genetics and Molecular biology (Engineering track)	UNIPi	ENGLISH	12
	Artificial Intelligence II (common course)	UNIPi	ENGLISH	6
	Physio-pathology (common course)	UNIPi	ENGLISH	6
	Biotechnologies applied to sense physiology (common course)	UNIPi	ENGLISH	6
	Smart materials and sensors (Biology track)	UNIPi	ENGLISH	12
	Microbiology and public health (Engineering track)	UNIPi	ENGLISH	12
	Total Credits 1st Year (for each track)			60
	2nd Year at AMU	University	Language	Credits
ABSCU43	Introduction; descriptive statistics adapted to biomarkers	AMU	ENGLISH	3
ABSCU44	Machine Learning: applications to the analysis of single cell data sets	AMU	ENGLISH	6
ABSCU45	Image analysis-Biomarker diagnosis	AMU	ENGLISH	3
ABSCU46	Open Science & Reproducible Science	AMU	ENGLISH	6
ABSCU03	Bibliography - writing of a thesis on the internship topic	AMU	ENGLISH	6
	Focused Lab Training (elective, up to 9 ECTS) = Tutorial project	AMU/UNIPi/ Host institutions	ENGLISH	6
ABSDU01	Lab/Thesis	AMU	ENGLISH	30
	Total Credits 2nd Year			60
	Total credits			120

Table 3 - Conversion

1st Year at AMU		Credits
Total Credits 1st Year		12
2nd Year at AMU		Credits
Introduction; descriptive statistics adapted to biomarkers		3
Machine Learning: applications to the analysis of single cell data sets		6
Image analysis -Biomarker diagnosis		3
Open Science & Reproducible Science		6
Bibliography - writing of a thesis on the internship topic		6
Focused Lab Training (Tutorial project)		6
Lab/Thesis		30
Total Credits 2nd Year		60
Total credits		120
1st Year at UNIPi		Credits
Artificial Intelligence I		6
Artificial Intelligence II		6
Total Credits 1st Year		0
2nd Year at UNIPi		Credits
Cell signalling and imaging tools, 6 ECTS - Common course		6
Bioengineering and Experimental Models in Health and Disease - Common course		6
Omics: Biotechnology and AI for health - Common course		6
Job placement activities - Common course		3
Focused Lab Training - Common course		6
Electives - Common course		6
Internship+Thesis		27
Total Credits 2nd Year		60
Total credits		120

Table 4 – French (/20) and Italian (30) examination Grading Systems

Courses taken during the mobility period will be graded and conversed according to the following:

ECTS GRADE SYSTEM	FRENCH GRADE SYSTEM	ITALIAN GRADE SYSTEM
A	16-20	30 cum laude
B	14-15	29-30
C	12-13	27-28
D	11	24-26
E	10	18-23
F	< 10	< 18

Table 5 – French (/20) and Italian (/110) and Thesis Grading Systems

FRENCH GRADE SYSTEM	ITALIAN GRADE SYSTEM ¹
18/20 – 19/20	110/110 - 110/110 - with honors - cum laude
17/20	108/110 - 109/110
16/20	104/110 - 107/110
15/20	100/110 - 103/110
14/20	95/110 - 99/110
13/20	90/110 - 94/110
12/20	85/110 - 89/110
11/20	80/110 - 84/110
	75/110 - 79/110
10/20	70/110 - 74/110
	66/110 - 69/110
<10	Fail

¹ The vote is expressed on the basis of 110 points. For the attribution of the honors, the unanimous vote of the committee is required. The final grade is then determined by the commission in front of which the candidate discusses the thesis. The maximum grade is 110/110 with the possible addition of honors. The final grade results from the sum of the following components:

A) marks average expressed in thirtieths, weighted with the credits, on the profit examinations passed within the Master's Degree Course (75% of the total weight);

B) average of the grades assigned in thirtieths by each of the 5 to 7 members of Commission (2 to 4 fixed members, the supervisor and the two thesis examiners) based on the outcome of the test and taking into consideration the supervisor's and examiners' assessments (25% of the total weight).

The final grade is defined according to the following formula $(A \times 3 + B) \times 115/120$. The supervisor or the Commission's president may recommend, after consultation with thesis examiners, awarding the honors in the case the student reaches a final grade of 110 out of 110 without rounding up. In the awarding of the honors it is also mandatory that the student has reached a grade of 30 out of 30 with honors in at least 2 fundamental exams of the master degree course or that he/she has a curricular average of at least 29 out of 30.