DIPLÔME NATIONAL DE MASTER CONTRÔLÉ PAR L'ÉTAT

Master
Data Management in Biosciences

NATIONAL DEGREE OF MASTER OF SCIENCES ACCREDITED BY THE UNIVERSITY OF VALENCIENNES

MORE DETAILS

20 STUDENTS MAX. PER CLASS

50% OF CLASSES DELIVERED BY INDUSTRY PROFESSIONALS

100% OF CLASSES TAUGHT IN ENGLISH

ADVANTAGES

- Apprenticeship open at Master 2 level
- Mobility possible during S2 or M2
- Diploma in Humanities including 3 certificates
- Language Certificate (TOEIC)
- Interdisciplinary curriculum

CONTACT

Farouk ALLOUCHE
Academic coordinator
farouk.allouche@univ-catholille.fr

Our master's program aims at training high level professionals in the field of data in biosciences from data collection to data mining including quality control, splicing, statistical analysis, ... Students are also meant to have a strong human and ethical background. Through a multidisciplinary approach, a multicultural environment and professors from academia and industry, students have access to a multi-perspective approach to the field and the possibility to directly join the job market or to pursue their doctoral studies after graduation.

CANDIDATE PROFILE

MASTER 1

- Students who want to join a fast-growing sector and embrace a career combining biosciences, Big Data and the human-machine interface.
- Students holding a Bachelor in life sciences, computer sciences, health sciences or any other relevant/equivalent degree are welcomed to join our master program.
- B1 Level in English is mandatory.

MASTER 2

- Students who have validated an M1 in the domain or an equivalent curriculum.
- B2 level in English is Mandatory.

CAREER OPPORTUNITIES

- Biostatistician
- Bioinformatician
- DATA scientist
- DATA analyst
- DATA manager
- Project coordinator in health
- Clinical assay coordinator

EDUCATIONAL PROGRAM

MASTER 1 | SEMESTER 1

Course	ECTS
• Cellular and Molecular Biology of Diseases	4
• Biostatistics 1	3
• Bioinformatics 1	4
• Databases 1	4
• Probability & Statistics	3
• Languages	2
• Communication Tools/Dataviz	2
• Project Management	3
• Basics in Cellular and Molecular Biology ■	5
• Algorithms ●	5

■ *For students from Computer Sciences background*
● *For students from Life and Health Sciences*

MASTER 1 | SEMESTER 2

Course	ECTS
• Scientific method	2
• Biostatistics 2	3
• Bioinformatics 2	4
• Object Oriented Programming	3
• Data Structure and Complexity	4
• Databases 2	4
• Regulations and Laws	2
• Languages	2
• Professionalization (internship) 2 pathways : research oriented or industry oriented	6

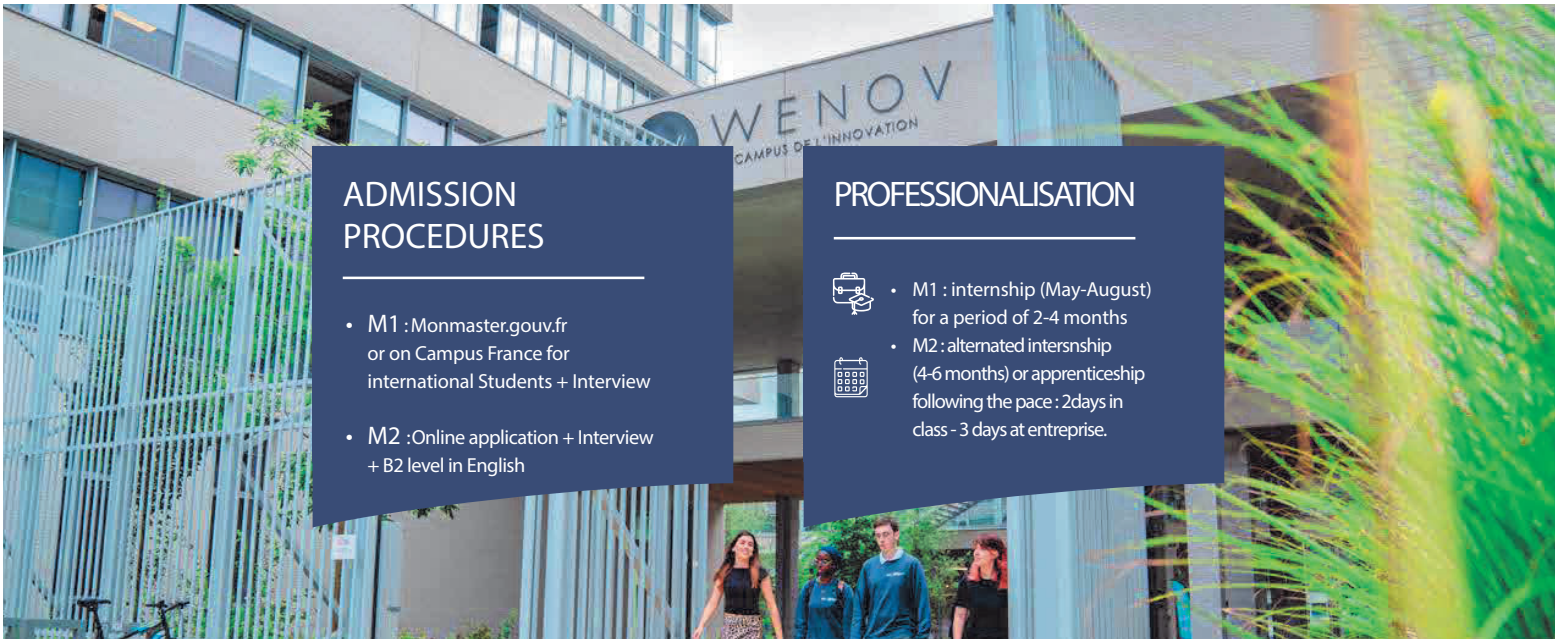
MASTER 2 | SEMESTER 1

• Introduction to translational research and clinical trials	3
• Advances in Biosciences - Seminars 1	2
• Applied Biotechnologies 1	3
• Operational tools for data management in biosciences	4
• Introduction to AI & Machine Learning	4
• Mechanisms of Data protection	2
• Innovation Management	3
• European Environment and Policies in life sciences and public health	3
• Responsible Research and Innovation	3
• Languages	3

MASTER 2 | SEMESTER 2

• Methodology of epidemiologic studies	3
• Advances in Biosciences - Seminars II	2
• Applied Biotechnologies II	3
• System and data management in bioscience	4
• Data Mining in Biosciences	3
• Data Model - Big data	3
• Communication Techniques	2
• Languages	3
• Professionalization, 3 pathways : research internship, industry internship, apprenticeship	7

TO KNOW : Fully taught in english. C1 Level in English expected at graduation.



ADMISSION PROCEDURES

- M1 : Monmaster.gouv.fr or on Campus France for international Students + Interview
- M2 : Online application + Interview + B2 level in English

PROFESSIONALISATION

- M1 : internship (May-August) for a period of 2-4 months
- M2 : alternated intersnship (4-6 months) or apprenticeship following the pace : 2days in class - 3 days at entreprise.