



MASTER (LM) DEGREE COURSE IN

QUANTITATIVE AND COMPUTATIONAL BIOSCIENCES

Study programme for students enrolled in the academic year 2025-2026 – entirely held in

English

1st YEAR	
A COUPLE OF UNITS TO BE CHOSEN AMONG THE FOLLOWING	CFU
1) For students with a previous educational path in biological disciplines	
GENERAL MATHEMATICS	6
STATISTICS AND R	6
2) For students with a previous educational path in non-biological disciplines	
INTRODUCTION TO MOLECULAR AND CELLULAR BIOLOGY	6
INTRODUCTION TO ECOLOGY	6
MANDATORY UNITS	CFU
BIG DATA: AN ETHICAL AND ECONOMICAL PERSPECTIVE	1
INTRODUCTION TO PROGRAMMING IN PYTHON	6
IMAGE BASED LEARNING (INTEGRATED COURSE) – QUANTITATIVE IMAGING (MOD. A) – SENSORS, MEASUREMENT ERRORS DATA MANAGEMENT (MOD. B)	12
GENOMICS (INTEGRATED COURSE) – NEXT GENERATION SEQUENCING (MOD. A) – COMPUTATIONAL HUMAN EVOLUTION (MOD. B)	12
MACHINE LEARNING AND NEURAL NETWORKS	6
ADVANCED STATISTICS AND DATA ANALYSIS	6
SYSTEMS BIOLOGY	6
2nd YEAR	
MANDATORY UNITS	CFU
COMPLEX SYSTEMS: THEORY AND APPLICATIONS	6
NATURE IN CONTEXT	6
ONE UNIT TO CHOOSE AMONG THE FOLLOWING	CFU
METAGENOMICS	6
INTEGRATIVE BIOLOGY	6

UNITS THAT CAN BE USED AS FREE CREDITS	CFU
ETHICS, TECHNOLOGY AND SUSTAINABILITY	6
12 ADDITIONAL FREE CHOICE CREDITS	
INTERNSHIP	14
FINAL THESIS/DISSERTATION	15

ANY FURTHER NOTES

- Attendance is mandatory according to the didactic regulation.
- Free-choice credits can be chosen among the university's educational offer as long as they are consistent with the educational path.
Units specifically for free choice have been introduced into the offer, shown in the table, the contents of which are certainly consistent with the educational path of the study programme.