

STUDY PLAN 2024 – 2025, Master in Chemical Biology

Mandatory courses (26 ECTS)

Course	Code	Semester	Weekly hours	Credits
Current topics in Chemical Biology and Biochemistry	14CB01	F	6	8
Basic technics in Chemical Biology	14CB02	F	4	6
Tutorial	14CB03	F	10	5
Micoscopy and imaging course	14B063A	F	3	3
Trends in Chemical Biology and drug discovery	BIOENG-510	S	2+2	4

Optional courses (4 ECTS) *

*The optional course/s will be decided upon student's arrival with Prof. Robbie Loewith

Course	Code	Semester	Weekly hours	Credits
Macromolecular structure and interactions	CH-311	F	2	2
Dynamics of biomolecular processes	CH-312	S	2	2
Drug discovery and development	CH-317	S	2	2
Cellular signalling	CH-411	F	2	2
Methods in drug development	CH-455	F	2	3
Principles of cellular and molecular biology	14B010	F/S	3	8
Introduction to glycobiology	14B072	S	2	3
Hot topics and breakthroughs in biochemistry	14C004	F/S	2	6
Elements of bioinformatics	14F001	F	3	5
Bioorganic and biolytical chemistry	14C022	F	2	4
Target-oriented synthesis	14C024	F	2	4
Bioorganic chemistry II	14C028	F	2	4
Structural Biology	BIO-315	S	2 + 2	4
Fundamentals of Biophotonics	BIO-443	S	2 + 1	3
Stem cells and organoids	BIO-447	F	2 + 1	3
Genomics and Bioinformatics	BIO-463	S	2 + 2	4
Selected topics in life sciences	BIOENG-430	F	2	3
Nanobiotechnology and biophysics	CH-413	S	2 + 1	3
Protein mass spectrometry and proteomics	CH-419	S	2	2
Supramolecular chemistry	CH-424	F	2	2
Physical and computational organic chemistry	CH-431	S	2	2
Structure and reactivity	CH-432	F	2	3
Asymmetric catalysis for fine chemicals synthesis	CH-435	S	2	3
Total synthesis of natural products	CH-438	F	2	3
Principles and Applications of System Biology	CHE-411	F	2 + 1	3
Image Processing I	MICRO-511	F	3	3
Image Processing II	MICRO-512	S	3	3
Physics of the cell	PHYS-301	S	2 + 1	3
Chimie Organique II : Principes de réactivité & Chimie Bioorganique	13C003	F/S	2	6
Biologie moléculaire de la cellule	13B001	F/S	3	9
Biochimie III	13C008A	F	3	3
Biochimie III	13C008P	S	3	3

Practical Training Period (60 ECTS)

Course	Semester	Credits
Laboratory Project Immersion I	S	30
Laboratory Project Immersion II	F	30