

Study Programme

Academic year 2022-2023

Faculty of Sciences

Exchange Programme in Bioinformatics (master's level)

Language of instruction: English

Programme version 6

General Courses

The exchange programme contains a preferred list of English courses taught at UGent of the Master of Science in Bioinformatics. If you want to choose another course of the main programme, please contact the <u>departmental Erasmus coordinator</u>. Tips Learning Agreement:

• Please check the departmental rules for incoming students.

- A minimum number of 20 ECTS per semester (or 40 ECTS per year) should be chosen.
- 80% of the credits should be chosen from the course programme in Bioinformatics.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	C003694	Statistical Genomics Lieven Clement Department of Mathematics, Computer Science and Statistics	6			A:1	180
2	C003695	Applied High-throughput Analysis Tim De Meyer Department of Data Analysis and Mathematical Modelling	6			A:1	180
3	C003696	Genome Biology Klaas Vandepoele Department of Plant Biotechnology and Bioinformatics	6			A:2	180
4	C004000	Integrative Biology Kathleen Marchal Department of Plant Biotechnology and Bioinformatics	3			A:2	80
5	C004122	Capita Selecta in Bioinformatics Kathleen Marchal Department of Plant Biotechnology and Bioinformatics	3			A:1	75
1.	1 System	ns Biology Module					
Nr	Course		CRDT	Ref	MT1	Session	Study
1	C003709	Evolutionary Biology Yves Van de Peer Department of Plant Biotechnology and Bioinformatics	3			A:2	80
2	C003527	Biostatistics Kathleen Marchal Department of Plant Biotechnology and Bioinformatics	3			B:1	80
3	C003617	Modelling of Biological Systems Steven Maere Department of Plant Biotechnology and Bioinformatics	3			A:1	80
4	C003086	Proteomics Bart Devreese Department of Biochemistry, Physiology and Microbiology	3			A:1	80
1.	2 Bioscie	ence Engineering Module					
Nr	Course		CRDT	Ref	MT1	Session	Study
1	1002617	Bio-imaging and Image Informatics Andre Skirtach Department of Biotechnology	4			A:1	120
2	1002611	Plant Biotechnology Godelieve Gheysen Department of Biotechnology	5			A:2	150
3	1002615	Protein Chemistry Els Van Damme Department of Biotechnology	4			A:1	120
4	1002612	Industrial Biotechnology Wim Soetaert Department of Biotechnology	5			A:1	150
5	1002618	Process Engineering 2	5			A:1	150

Paul Van der Meeren -- Department of Green Chemistry and Technology

1.3 Engineering Module

The following courses are intended for students with an advanced engineering and/or computer science background rather than molecular biology.

1	E017930	Parallel and Distributed Software Systems Filip De Turck Department of Information Technology	6	A:1	180
2	C003711	Computational Challenges in Bioinformatics Peter Dawyndt Department of Mathematics, Computer Science and Statistics	6	A:2	180
3	E061330	Machine Learning Joni Dambre Department of Electronics and Information Systems	6	B:1	180
4	E004120	Optimisation Techniques Liubomir Jovanov Department of Telecommunications and Information Processing	6	B:2	180

1.4 Applied Mathematics and Informatics Module

Nr	Course		CRDT	Ref	MT1	Session	Study
1	1002642	Biological Databases Wim Van Criekinge Department of Data Analysis and Mathematical Modelling	3			B:2	90
2	C002732	Programming for Bioinformatics Pieter De Bleser Department of Molecular Biology	6			A:1	160
3	C003701	Selected Topics in Mathematical Optimization Paul Van Liedekerke Department of Data Analysis and Mathematical Modelling	3			A:2	75
4	C003083	Bioinformatics Algorithms Veerle Fack Department of Mathematics, Computer Science and Statistics	3			A:2	80
5	1002091	Predictive Modelling Willem Waegeman Department of Data Analysis and Mathematical Modelling	6			A:1	150
1.	5 Biology	/ Module					
Nr	Course		CRDT	Ref	MT1	Session	Study
1	C003712	Cellular and Molecular Biology Moritz Nowack Department of Plant Biotechnology and Bioinformatics	6			A:1	180
2	C003713	Introduction to Bioinformatics Kathleen Marchal Department of Plant Biotechnology and Bioinformatics	3			A:2	90

Teaching

When a course is not taught (solely) in the programme's language of instruction, the effectively used languages are indicated in square brackets following the cours name, using the following ISO codes:

bg: Bulgarian	de: German	es: Spanish	ja: Japanese	pl: Polish	sh: Kroatian/Serbian	zh: Chinese
cs: Czech	el: Greek	fr: French	nl: Dutch	pt: Portuguese	sl: Slovene	
da: Danish	en: English	it: Italian	no: Norwegian	ru: Russian	sv: Swedish	

Semester

Semesters are indicated by their number (1 or 2); semester 3 represents the summer period and J indicates a course spanning semesters 1 and 2. When a capital letter precedes a semester number, the course has multiple offerings. The letter indicates the offering concerned. When a semester is shown in brackets, the course in not offered this year in the specific offering. The offering frequency and first year of offering are indicated by the following codes:

a: bi-annually	c: annually, from 2023-2024	f: annually, from 2024-2025	i: annually, from 2025-2026
b: tri-annually	d: bi-annually, from 2023-2024	g: bi-annually, from 2024-2025	j: bi-annually, from 2025-2026
	e: tri-annually, from 2023-2024	h: tri-annually, from 2024-2025	k: tri-annually, from 2025-2026