

Study Programme

Academic year 2021-2022

Faculty of Sciences, Faculty of Engineering and Architecture, Faculty of Bioscience Engineering

Master of Science in Bioinformatics -- Engineering

Language of instruction: English

Programme version 5

1 Gener	al Courses			33	credits
I.1 Applie	ed Bioinformatics Module			33	credits
Nr Course		CRDT R	ef MT1	Session	Study
1 C00369	4 Statistical Genomics Koen Van den Berge Department of Mathematics, Computer Science and Statistics	6		A:1	180
2 C00369	5 Applied High-throughput Analysis Tim De Meyer Department of Data Analysis and Mathematical Modelling	6	1	A:1	180
3 C00369	Genome Biology Yves Van de Peer Department of Plant Biotechnology and Bioinformatics	6	1	A:2	180
4 C00400	O Integrative Biology Kathleen Marchal Department of Plant Biotechnology and Bioinformatics	3	1	A:2	80
5 C00369	B Design Project Jan Fostier Department of Information Technology	9	1	A:J	270
6 C00412	2 Capita Selecta in Bioinformatics Yves Van de Peer Department of Plant Biotechnology and Bioinformatics	3		A:1	75
2.1 Engir	eering Module			36	credit
Vr Course		CRDT R	ef MT1	Session	Stud
I E017930	Parallel and Distributed Software Systems Jan Fostier Department of Information Technology	6	1	A:1	180
2 C00371	1 Computational Challenges in Bioinformatics Jan Fostier Department of Information Technology	6	1	A:2	180
3 E061330	O Machine Learning Joni Dambre Department of Electronics and Information Systems	6	2	B:1	180
E004120	Optimisation Techniques Ljubomir Jovanov Department of Telecommunications and Information Processing	6	2	B:2	180
2.1.1 Elec	tive Course List			12	credits
Subscribe to Nr Course	12 credit units from the following list.	CRDT R	ef MT1	Session	Stud
1 E034140	Parallel Computer Systems	6	CI IVIII	A:1	180
	Lieven Eeckhout Department of Electronics and Information Systems	- -			
2 E003600	Information Theory	6		B:2	180

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Heidi Steendam -- Department of Telecommunications and Information Processing

Eric Laermans -- Department of Information Technology

Frank Gielen -- Department of Information Technology

Patrick Segers -- Department of Electronics and Information Systems

E092621 Modelling of Physiological Systems

E019400 Information Security

E017822 Software Architecture

6

B:2

A:2

180

120

180

6 E074011	Quantitative Cell and Tissue Analysis An Hendrix Department of Human Structure and Repair	6		A:1	180	
7 E003421	Estimation and Decision Techniques Hiep Luong Department of Telecommunications and Information Processing	4		A:1	120	
8 C003399	Computerintensive Statistical Methods Dieter Fiems Department of Telecommunications and Information Processing	5		A:2	150	
9 E018210	Big Data Science Dieter De Witte Department of Electronics and Information Systems	6		A:2	180	
10 E016330	Artificial Intelligence Aleksandra Pizurica Department of Telecommunications and Information Processing	6		A:1	180	
11 F000918	Deep Learning Joni Dambre Department of Electronics and Information Systems	6		A:2	180	
12 E061340	Machine-learning Based Natural Language Processing Chris Develder Department of Information Technology	4		A:2	120	
13 E016340	Probabilistic Graphical Models Aleksandra Pizurica Department of Telecommunications and Information Processing	4		A:2	120	
2.2 Biology Module 9 credits						
Nr Course		CRDT Ref	MT1	Session	Study	
1 C003712	Cellular and Molecular Biology Sofie Goormachtig Department of Plant Biotechnology and Bioinformatics	6	1	A:1	180	
2 C003713	Introduction to Bioinformatics Kathleen Marchal Department of Plant Biotechnology and Bioinformatics	3	1	A:2	90	

_	0003713	introduction to bioinformatics	3	1	n.2	90
		Kathleen Marchal Department of Plant Biotechnology and Bioinformatics				
2.	3 Master	's Dissertation			30 cr	edits

Nr Course	CRDT F	Ref MT1	Session	Study
1 C003720 Master's Dissertation	30	2	A:J	900
N. N.				

3 Elective Courses 12 credits

Subscribe to no less than 1 and no more than 2 modules from the following list. Subject to approval by the faculty.

3.1 Elective Course List

Subscribe to 6 credit units from the following list.

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Ni			CRDT Ref N	/IT1 Session	Study
1	C004001	Internship	6	A:1	150
		N. N.			

3.2 Elective Courses UGent

Subscribe to no less than 6 and no more than 12 credit units from the courses of Ghent University including the <u>Ghent University elective course list</u>. Subject to approval by the curriculum committee.

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 2022-2023 f: annually, from 2023-2024 i: annually, from 2024-2025 b: tri-annually d: bi-annually, from 2022-2023 g: bi-annually, from 2023-2024 j: bi-annually, from 2024-2025 e: tri-annually, from 2022-2023 h: tri-annually, from 2023-2024 k: tri-annually, from 2024-2025

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