GHENT UNIVERSITY

Study Programme

Academic year 2024-2025

Faculty of Psychology and Educational Sciences,Faculty of Engineering and Architecture

Master of Science in Teaching in Science and Technology (abridged programme) -- Engineering and Technology

Language of instruction: Dutch

Programme version 6

1 Teaching Component — 60 credits

1.1 Programme Pathway Theoretical Education — 18 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	H002169	Powerful Learning Environments *Bram De Wever -- Department of Educational Studies*	6		1	A:1, K:1, B:1	180
2	H002197	The Teacher within School and Society *Melissa Tuytens -- Department of Educational Studies*	4		1	A:1, B:1, K:1	120
3	H002198	Psychology of Adolescence *Wim Beyers -- Department of Developmental, Personality and Social Psychology*	4		1	A:1, K:1, B:1	120
4	H002196	Classroom Management and Reflection *Tijs Rotsaert -- Department of Educational Studies*	4		1	A:2, B:2, K:2	120

1.2 Programme Pathway Teaching Methodology — 12 credits

Subscribe to 12 credit units from the following list, with
- 6 credit units with reference a
- 6 credit units with another reference with
  - Bachelors of Science in de ingenieurswetenschappen: a course with reference b, c or d
  - Bachelors of Science in de industriële wetenschappen: a course with reference b or c
  - Bachelors of Science in de ingenieurswetenschappen: architectuur and Bachelors of Science in de industriële wetenschappen: industrieel ontwerpen, also a course with reference e
  - Bachelors of Science in de industriële wetenschappen - Main Subject 'chemie', Bachelors of Science in de ingenieurswetenschappen - Main Subject 'chemische technologie en materiaalkunde' and Masters of Science in de industriële wetenschappen Main Subjects 'biochemie' or 'milieukunde' and Masters in de industriële wetenschappen: chemie, with elective courses 'biochemie' or 'milieukunde': a course with reference also a course with reference f

Taking an additional Teaching Methodology Course implies taking the corresponding Internship in the Programme Pathway Internship.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	H002221	Teaching Methodology: Engineering and Technology *Francis wyffels -- Department of Electronics and Information Systems*	6	a	1	A:J	180
2	H002224	Teaching Methodology Physics *Stefaan Cottenier -- Department of Electromechanical, Systems and Metal Engineering*	6	b	1	C:J	180
3	H002225	Teaching Methodology: Computer Science *Kris Coolsaet -- Department of Mathematics, Computer Science and Statistics*	6	c	1	A:J	180
4	H002226	Teaching Methodology: Mathematics I *Hendrik Van Maldeghem -- Department of Mathematics, Computer Science and Statistics*	6	d	1	A:J	180
5	H002223	Teaching Methodology: Architecture *Maarten Van Den Driessche -- Department of Architecture and Urban Planning*	6	e	1	A:J	180
6	H002219	Teaching Methodology: Chemistry *Katrien Strubbe -- Department of Chemistry*	6	f	1	A:J	180

1.3 Programme Pathway Internship — 15 credits

Subscribe to 1 module from the following list. Subject to approval by the faculty.

1.3.1 A. The student does not take an Additional Teaching Methodology Course as an Elective Course — 15 credits

Subscribe to 15 credit units, with
- 7 credit units from courses with reference a
- 4 credit units with reference b, corresponding to the Teaching Methodology Course taken in de Programme Pathway Teaching Methodology.

- 4 credit units with reference c, corresponding to the Teaching Methodology Course taken in de Programme Pathway Teaching Methodology, or 'Internship C: Engineering and Technology'.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	H002282	Reference Internship: Engineering and Technology *Francis wyffels -- Department of Electronics and Information Systems*	3	a	1	A:J	90
2	H002301	Internship A: Engineering and Technology *Francis wyffels -- Department of Electronics and Information Systems*	4	a	1	A:J	108
3	H002316	Internship B: Physics *Philippe Smet -- Department of Solid State Sciences*	4	b	1	A:J	108
4	H002318	Internship B: Computer Science *Kris Coolsaet -- Department of Mathematics, Computer Science and Statistics*	4	b	1	A:J	108
5	H002319	Internship B: Mathematics *Hendrik Van Maldeghem -- Department of Mathematics, Computer Science and Statistics*	4	b	1	A:J	108
6	H002321	Internship B: Architecture *Maarten Van Den Driessche -- Department of Architecture and Urban Planning*	4	b	1	A:J	108
7	H002312	Internship B: Chemistry *Katrien Strubbe -- Department of Chemistry*	4	b	1	A:J	108
8	H002428	Internship C: Engineering and Technology *Francis wyffels -- Department of Electronics and Information Systems*	4	c	1	J:J	108
9	H002335	Internship C: Physics *Philippe Smet -- Department of Solid State Sciences*	4	c	1	A:J	108
10	H002340	Internship C: Computer Science *Kris Coolsaet -- Department of Mathematics, Computer Science and Statistics*	4	c	1	A:J	108
11	H002336	Internship C: Mathematics *Hendrik Van Maldeghem -- Department of Mathematics, Computer Science and Statistics*	4	c	1	A:J	108
12	H002341	Internship C: Architecture *Maarten Van Den Driessche -- Department of Architecture and Urban Planning*	4	c	1	A:J	108
13	H002330	Internship C: Chemistry *Katrien Strubbe -- Department of Chemistry*	4	c	1	A:J	108

1.3.2 B. The student takes an Additional Teaching Methodology Course as an Elective Course — 15 credits

Subscribe to 15 credit units from the following list, with
7 credit units from the courses with reference a
4 credit units from the courses with reference b corresponding to the Teaching Methodology Course taken in the Programme Pathway Teaching Methodology
4 credit units from the courses with reference c corresponding to the Teaching Methodology Course taken in Module 2 of the Elective courses (Additional Teaching Methodology Course).

Nr	Course		CRDT	Ref	MT1	Session	Study
1	H002282	Reference Internship: Engineering and Technology *Francis wyffels -- Department of Electronics and Information Systems*	3	a	1	A:J	90
2	H002301	Internship A: Engineering and Technology *Francis wyffels -- Department of Electronics and Information Systems*	4	a	1	A:J	108
3	H002316	Internship B: Physics *Philippe Smet -- Department of Solid State Sciences*	4	b	1	A:J	108
4	H002318	Internship B: Computer Science *Kris Coolsaet -- Department of Mathematics, Computer Science and Statistics*	4	b	1	A:J	108
5	H002319	Internship B: Mathematics *Hendrik Van Maldeghem -- Department of Mathematics, Computer Science and Statistics*	4	b	1	A:J	108
6	H002321	Internship B: Architecture *Maarten Van Den Driessche -- Department of Architecture and Urban Planning*	4	b	1	A:J	108
7	H002312	Internship B: Chemistry *Katrien Strubbe -- Department of Chemistry*	4	b	1	A:J	108
8	H002335	Internship C: Physics *Philippe Smet -- Department of Solid State Sciences*	4	c	1	A:J	108
9	H002340	Internship C: Computer Science *Kris Coolsaet -- Department of Mathematics, Computer Science and Statistics*	4	c	1	A:J	108
10	H002336	Internship C: Mathematics *Hendrik Van Maldeghem -- Department of Mathematics, Computer Science and Statistics*	4	c	1	A:J	108
11	H002341	Internship C: Architecture *Maarten Van Den Driessche -- Department of Architecture and Urban Planning*	4	c	1	A:J	108

12	H002330	Internship C: Chemistry *Katrien Strubbe -- Department of Chemistry*	4	c	1	A:J	108
13	H002334	Internship C: Bioengineering *Kathy Messens -- Department of Biotechnology*	4	c	1	A:J	108

1.4 Programme Pathway Practice Oriented Educational Research Project 9 credits

Nr	Course		CRDT	Ref	MT1	Session	Study
1	H002464	Practice Oriented Educational Research Project	9		1	J:J	250

1.5 Elective Courses 6 credits

Subscribe to 6 credit units from one or different modules from the following list. Subject to approval by the faculty.

1.5.1 Module 1: List of Elective Courses

The courses with reference b can only be chosen if the course with reference a has been passed.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	H001608	Movement and Sports: Now and Later *Veerle Segers -- Department of Movement and Sports Sciences*	4		1	A:2	120
2	H001977	Coaching and Diversity *Elisabeth De Schauwer -- Department of Special Education*	3	UKV	1	A:J	90
3	A005503	Context and Nuance. A Critical Reflection on Current Topics *Stef Craps -- Department of Literary Studies*	6	UKV	1	A:1	180
4	H001838	Culture, Media and Education *Kris Rutten -- Department of Educational Studies*	4		1	A:2	120
5	H002150	Digital Learning Environments *Tammy Schellens -- Department of Educational Studies*	3		1	A:1	90
6	C004225	Physics for Citizens *Steven Caluwaerts -- Department of Physics and Astronomy*	4	UKV	1	A:1	120
7	D012276	Introduction to Flemish Sign Language *Beatrijs Wille -- Department of Linguistics*	4		1	A:1	120
8	H000358	Learning Psychology *Yannick Boddez -- Department of Experimental Clinical and Health Psychology*	5		1	A:2	150
9	H000124	Learning Disabilities *Petra Warreyn -- Department of Experimental Clinical and Health Psychology*	5		1	A:2	150
10	H002128	Methods to Facilitate Socratic Group Discussions in the Educational Context *Veerle Provoost -- Department of Philosophy and Moral Sciences*	4		1	A:2	120
11	H002213	Motivational Psychology *Joachim Waterschoot -- Department of Developmental, Personality and Social Psychology*	5		1	A:1	150
12	K000245	Sociology of Education *Mieke Van Houtte -- Department of Sociology*	5		1	A:2	150
13	E099210	Essentials of Artificial Intelligence: a Beginner's Guide [en] *Joni Dambre -- Department of Electronics and Information Systems*	3	UKV	1	A:1	90
14	H002246	Theory and Practice of Content and Language Integrated Learning *Ulrike Vogl -- Department of Linguistics*	3	a	1	A:1	90
15	H002344	Linguistic Proficiency in Content and Language Integrated Learning: Dutch *Bart Deygers -- Department of Translation, Interpreting and Communication*	3	b	1	A:2	90
16	H002247	Linguistic Proficiency in Content and Language Integrated Learning: English [en] *June Eyckmans -- Department of Translation, Interpreting and Communication*	3	b	1	A:2	90
17	H002248	Linguistic Proficiency in Content and Language Integrated Learning: French [fr] *Pascale Hadermann -- Department of Linguistics*	3	b	1	A:2	90
18	H002249	Linguistic Proficiency in Content and Language Integrated Learning: German [de] *Gunther Martens -- Department of Literary Studies*	3	b	1	A:2	90
19	H002283	Teaching Methodology: General Subjects for Technical and Vocational Education, including Internship *Katrien Strubbe -- Department of Chemistry*	6		1	A:2	160

1.5.2 Module 2: Additional Course Teaching Methodology

Taking an additional Teaching Methodology Course implies taking the corresponding Internship in the Programme Pathway Internship.
- Bachelors of Science in de ingenieurswetenschappen: a course with reference g, h or i. The course unit with reference l can only be

taken if in the Programme Pathway Teaching Methodology, 'Teaching Methodology Mathematics I' is taken prior or concurrently.
- Bachelors of Science in de industriële wetenschappen: a course with reference g or h
- Bachelors of Science in de ingenieurswetenschappen: architectuur and Bachelors of Science in de industriële wetenschappen: industrieel ontwerpen, also a course with reference j
- Bachelors of Science in de industriële wetenschappen - main subject chemie, Bachelors of Science in de ingenieurswetenschappen - Main Subject 'chemische technologie en materiaalkunde' and Masters of Science in de industriële wetenschappen Main Subjects 'biochemie' or 'milieukunde', also a course with reference k
- Master in de industriële wetenschappen: chemie, with elective courses 'biochemie' or 'milieukunde': a course with reference m

Students who are able to demonstrate that they have acquired at least 30 academic credits in another specific domain (60 credits if it concerns a language), can submit a request to the Curriculum Manager for the Master of Education to take the corresponding teaching methodology course. If the Curriculum Manager agrees, the Programme Pathway Internship needs to be revised allowing a student to follow an "Internship C" in this additional teaching methodology.

Nr	Course		CRDT	Ref	MT1	Session	Study
1	H002224	Teaching Methodology Physics *Stefaan Cottenier -- Department of Electromechanical, Systems and Metal Engineering*	6	g	1	C:J	180
2	H002225	Teaching Methodology: Computer Science *Kris Coolsaet -- Department of Mathematics, Computer Science and Statistics*	6	h	1	A:J	180
3	H002226	Teaching Methodology: Mathematics I *Hendrik Van Maldeghem -- Department of Mathematics, Computer Science and Statistics*	6	i	1	A:J	180
4	H002223	Teaching Methodology: Architecture *Maarten Van Den Driessche -- Department of Architecture and Urban Planning*	6	j	1	A:J	180
5	H002219	Teaching Methodology: Chemistry *Katrien Strubbe -- Department of Chemistry*	6	k	1	A:J	180
6	H002227	Teaching Methodology: Mathematics II *Hendrik Van Maldeghem -- Department of Mathematics, Computer Science and Statistics*	6	l	1	J:J	168
7	H002218	Teaching Methodology: Bioengineering *Kathy Messens -- Department of Biotechnology*	6	m	1	A:J	180

1.5.3 Module 3: Additional Internship

Nr	Course		CRDT	Ref	MT1	Session	Study
1	H002332	Short Additional Internship *Katrien Strubbe -- Department of Chemistry*	3		1	A:J	80
2	H002333	Extended Additonal Internship *Katrien Strubbe -- Department of Chemistry*	6		1	A:J	160

1.5.4 Module 4: an Elective Course related to Education

Subscribe to a course of no less than 6 credit units, related to education, and lectured at a university belonging to the Flemish Community (see also: Enlight Elective Courses), subject to approval by the faculty.

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 2025-2026	f: annually, from 2026-2027	i: annually, from 2027-2028
b: tri-annually	d: bi-annually, from 2025-2026	g: bi-annually, from 2026-2027	j: bi-annually, from 2027-2028
	e: tri-annually, from 2025-2026	h: tri-annually, from 2026-2027	k: tri-annually, from 2027-2028