

Faculty of Sciences, Faculty of Psychology and Educational Sciences

Master of Science in Teaching in Science and Technology -- Physics and Astronomy

Language of instruction: Dutch

Programme version 6

1 Domain Component

54 credits

For courses without indication of the standard learning path, the student can choose whether to take the course in the first or second year, depending on the rest of the curriculum.

1.1 General Courses

28 credits

Subscribe to 28 credit units from the following list, with 24 credit units with reference a.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C004503 Solid State and Nano Physics [en] <i>Christophe Detavernier -- Department of Solid State Sciences</i>	6	a		A:1	180
2	C004504 Computational Physics [en] <i>Toon Verstraelen -- Department of Physics and Astronomy</i>	6	a		A:1	180
3	C004502 Subatomic Physics [en] <i>Didar Dobur -- Department of Physics and Astronomy</i>	6	a		A:1	180
4	C004505 Theoretical and Numerical Astrophysics [en] <i>Maarten Baes -- Department of Physics and Astronomy</i>	6	a		A:1	180
5	C004506 Quantum Field Theory [en] <i>Thomas Mertens -- Department of Physics and Astronomy</i>	6	a		A:1	180
6	C004451 General Relativity [en] <i>Archisman Ghosh -- Department of Physics and Astronomy</i>	6	a		A:1	180
7	C004519 Professional Skills for Scientists [en, nl] <i>Philippe Smet -- Department of Solid State Sciences</i>	4			A:J	120

1.2 Elective Courses

26 credits

Subscribe to 26 credit units from no less than 1 and no more than 3 modules from the following list. Subject to approval by the faculty.

1.2.1 Elective Course List Physics & Astronomy

Subscribe to no less than 18 credit units from the elective course lists 2.1 through 2.5 from the MSc in Physics & Astronomy (English taught programme).

Students can also take the 2 remaining general courses.

Please note: some elective courses are offered every two years. Keep this in mind when choosing your elective courses

1.2.2 Elective Course List Society & Sustainability

Subscribe to no more than 8 credit units from the following list.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C004522 Project Work <i>Sven De Rijcke -- Department of Physics and Astronomy</i>	4			B:J	120
2	C004523 Materials for Energy Applications [en] <i>Christophe Detavernier -- Department of Solid State Sciences</i>	6			A:1	180
3	E039060 Sustainable Energy and Rational Use of Energy [en] <i>Filip Strubbe -- Department of Electronics and Information Systems</i>	4			A:2	120
4	E065460 Rational Use of Materials [en] <i>Tom Depover -- Department of Materials, Textiles and Chemical Engineering</i>	5			A:1	150
5	E076320 The Information Society and ICT <i>Erik Mannens -- Department of Electronics and Information Systems</i>	3			A:2	90
6	E078010 Technology and Environment [en] <i>Luc Martens -- Department of Information Technology</i>	3			A:1	90

1.2.3 Elective Courses UGent and other Universities

Subscribe to courses for no more than 8 credit units to be chosen from the courses of faculty of Sciences, faculty of Engineering and Architecture and/or from the study programmes of [Erasmus+ partner universities](#). No more than 8 credits units can be chosen from bachelor programmes.

2 Teaching Component

36 credits

For courses without indication of the standard learning path, the student can choose whether to take the course in the first or second year, depending on the rest of his/her curriculum. Students must complete the corresponding teaching methodology course before entering into an internship, or at least take the teaching methodology course simultaneously.

2.1 Programme Pathway Theoretical Education

12 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	H002197 The Teacher within School and Society <i>Melissa Tuytens -- Department of Educational Studies</i>	4			A:1	120
2	H002196 Classroom Management and Reflection <i>Tijs Rotsaert -- Department of Educational Studies</i>	4			A:2	120
3	H002198 Psychology of Adolescence <i>Wim Beyers -- Department of Developmental, Personality and Social Psychology</i>	4			A:1	120

2.2 Programme Pathway Teaching Methodology

6 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	H002224 Teaching Methodology Physics <i>Stefaan Cottenier -- Department of Electromechanical, Systems and Metal Engineering</i>	6			C:J	180

2.3 Programme Pathway Internship

12 credits

Subscribe to 12 credit units from the following list, with

- 4 credit units from the courses with reference a, if no additional Teaching Methodology Course is taken in Module 2 of the Elective Courses
- 4 credit units from the courses with reference b, if an additional Teaching Methodology Course is taken in Module 2 of the Elective Courses

Nr	Course	CRDT	Ref	MT1	Session	Study
1	H002299 Internship A: STEM <i>Katrien Strubbe -- Department of Chemistry</i>	4			A:J	100
2	H002316 Internship B: Physics <i>Philippe Smet -- Department of Solid State Sciences</i>	4			A:J	100
3	H002335 Internship C: Physics <i>Philippe Smet -- Department of Solid State Sciences</i>	4	a		A:J	100
4	H002336 Internship C: Mathematics <i>Hendrik Van Maldeghem -- Department of Mathematics, Computer Science and Statistics</i>	4	b		A:J	100

2.4 Elective Courses

6 credits

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

2.4.1 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 <i>Veerle Segers -- Department of Movement and Sports Sciences</i>	4	UKV		A:2	120
2	H001838 Culture, Media and Education <i>Kris Rutten -- Department of Educational Studies</i>	4			A:2	120
3	H002128 Methods to Facilitate Socratic Group Discussions in the Educational Context <i>Veerle Provoost -- Department of Philosophy and Moral Sciences</i>	4			A:2	120
4	H002213 Motivational Psychology <i>Sofie Morbée -- Department of Developmental, Personality and Social Psychology</i>	5			A:1	150
5	H002344 Linguistic Proficiency in Content and Language Integrated Learning: Dutch <i>Bart Deygers -- Department of Translation, Interpreting and Communication</i>	3	b	2	A:2	90
6	H002247 Linguistic Proficiency in Content and Language Integrated Learning: English [en] <i>June Eyckmans -- Department of Translation, Interpreting and Communication</i>	3	b	2	A:2	90
7	H002248 Linguistic Proficiency in Content and Language Integrated Learning: French [fr] <i>Pascale Hadermann -- Department of Linguistics</i>	3	b	2	A:2	90

8	H002249	Linguistic Proficiency in Content and Language Integrated Learning: German [de] <i>Gunther Martens -- Department of Literary Studies</i>	3	b	2	A:2	90
9	H002246	Theory and Practice of Content and Language Integrated Learning <i>Ulrike Vogl -- Department of Linguistics</i>	3	a	1	A:1	90
10	H002283	Teaching Methodology: General Subjects for Technical and Vocational Education, including Internship	6			A:2	160

2.4.2 Module 2: Additional Course Teaching Methodology

Taking an additional Teaching Methodology Course implies taking the corresponding Internship in the Programme Pathway Internship. 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	H002226 Teaching Methodology: Mathematics I <i>Hendrik Van Maldeghem -- Department of Mathematics, Computer Science and Statistics</i>	6			A:J	180

2.4.3 Module 3: Additional Internship

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

2.4.4 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.

3 Master's Dissertation 30 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C004107 Master's Dissertation <i>Philippe Smet -- Department of Solid State Sciences</i>	30		2	A:J	900

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 course name, using the following ISO codes:

bg: Bulgarian	de: German	es: Spanish	ja: Japanese	pl: Polish	sh: Croatian/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 is 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 2026-2027	f: annually, from 2027-2028	i: annually, from 2028-2029
b: tri-annually	d: bi-annually, from 2026-2027	g: bi-annually, from 2027-2028	j: bi-annually, from 2028-2029
	e: tri-annually, from 2026-2027	h: tri-annually, from 2027-2028	k: tri-annually, from 2028-2029