

Faculty of Bioscience Engineering, Faculty of Psychology and Educational Sciences
Master of Science in Teaching in Science and Technology -- Bioengineering

Language of instruction: Dutch

Programme version 4

1 Domain Component

Depending on the student's previous education (and in accordance with the admission requirements for the master's degree programme of Teaching in Science and Technology, Main Subject: Bioengineering):
No less than 54 and no more than 60 credits to be taken from the corresponding domain-specific master's programme (following the student's bachelor degree).

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 Melissa Tuytens -- Department of Educational Studies | 4 | | | A:1 | 120 |
| 2 | H002196 Classroom Management and Reflection Melissa Tuytens -- Department of Educational Studies | 4 | | | A:2 | 120 |
| 3 | H002198 Psychology of Adolescence Wim Beyers -- Department of Developmental, Personality and Social Psychology | 4 | | | A:1 | 120 |

2.2 Programme Pathway Teaching Methodology

6 credits

Subscribe to 6 credit units from the following list, with

- Bachelor in de bio-ingenieurswetenschappen: a course with reference a, b, c or d
- Bachelor in de bio-ingenieurswetenschappen, Main Subjects/Majors 'bos- en natuurbeheer', 'land- en waterbeheer' or 'land, water en klimaat': a course with reference a, b, c, d or e
- Bachelor in de biowetenschappen: a course with reference b or c
- Bachelor in de bio-industriële wetenschappen: a course with reference c

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|---|------|-----|-----|---------|-------|
| 1 | H002226 Teaching Methodology: Mathematics I Hendrik Van Maldeghem -- Department of Mathematics: Algebra and Geometry | 6 | a | | A:J | 180 |
| 2 | H002220 Teaching Methodology: Biology Dominique Adriaens -- Department of Biology | 6 | b | | A:J | 180 |
| 3 | H002219 Teaching Methodology: Chemistry Katrien Strubbe -- Department of Chemistry | 6 | c | | A:J | 180 |
| 4 | H002224 Teaching Methodology Physics Stefaan Cottenier -- Department of Electromechanical, Systems and Metal Engineering | 6 | d | | C:J | 180 |
| 5 | H002222 Teaching Methodology: Geography Nico Van de Weghe -- Department of Geography | 6 | e | | | 180 |

2.3 Programme Pathway Internship

12 credits

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

2.3.1 A. The student does not take an Additional Teaching Methodology Course as an Elective Course

12 credits

Subscribe to 12 credit units, with

- 4 credit units with reference a
- 4 credit units with reference b corresponding to the Teaching Methodology Course taken with reference b,c,d or e in de Programme Pathway Teaching Methodology
- 4 credit units with reference c corresponding to the Teaching Methodology Course taken with reference b,c,d or e in de Programme Pathway Teaching Methodology or Internship C: Bio-engineering

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|--|------|-----|-----|---------|-------|
| 1 | H002300 Internship A: Bioengineering Kathy Messens -- Department of Biotechnology | 4 | a | | A:J | 100 |

| | | | | | | |
|----|---------|---|---|---|-----|-----|
| 2 | H002319 | Internship B: Mathematics Hendrik Van Maldeghem -- Department of Mathematics: Algebra and Geometry | 4 | b | A:J | 100 |
| 3 | H002315 | Internship B: Biology Dominique Adriaens -- Department of Biology | 4 | b | A:J | 100 |
| 4 | H002312 | Internship B: Chemistry Katrien Strubbe -- Department of Chemistry | 4 | b | A:J | 100 |
| 5 | H002316 | Internship B: Physics Philippe Smet -- Department of Solid State Sciences | 4 | b | A:J | 100 |
| 6 | H002317 | Internship B: Geography Nico Van de Weghe -- Department of Geography | 4 | b | A:J | 108 |
| 7 | H002334 | Internship C: Bioengineering Kathy Messens -- Department of Biotechnology | 4 | c | A:J | 108 |
| 8 | H002336 | Internship C: Mathematics Hendrik Van Maldeghem -- Department of Mathematics: Algebra and Geometry | 4 | c | A:J | 100 |
| 9 | H002331 | Internship C: Biology Dominique Adriaens -- Department of Biology | 4 | c | A:J | 100 |
| 10 | H002330 | Internship C: Chemistry Katrien Strubbe -- Department of Chemistry | 4 | c | A:J | 100 |
| 11 | H002335 | Internship C: Physics Philippe Smet -- Department of Solid State Sciences | 4 | c | A:J | 100 |
| 12 | H002339 | Internship C: Geography Nico Van de Weghe -- Department of Geography | 4 | c | A:J | 108 |

2.3.2 B. The student takes an Additional Teaching Methodology Course as an Elective Course 12 credits

Subscribe to 12 credit units from the following list, with

- 4 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 | H002300 Internship A: Bioengineering Kathy Messens -- Department of Biotechnology | 4 | a | | A:J | 100 |
| 2 | H002319 Internship B: Mathematics Hendrik Van Maldeghem -- Department of Mathematics: Algebra and Geometry | 4 | b | | A:J | 100 |
| 3 | H002315 Internship B: Biology Dominique Adriaens -- Department of Biology | 4 | b | | A:J | 100 |
| 4 | H002312 Internship B: Chemistry Katrien Strubbe -- Department of Chemistry | 4 | b | | A:J | 100 |
| 5 | H002316 Internship B: Physics Philippe Smet -- Department of Solid State Sciences | 4 | b | | A:J | 100 |
| 6 | H002317 Internship B: Geography Nico Van de Weghe -- Department of Geography | 4 | b | | A:J | 108 |
| 7 | H002336 Internship C: Mathematics Hendrik Van Maldeghem -- Department of Mathematics: Algebra and Geometry | 4 | c | | A:J | 100 |
| 8 | H002331 Internship C: Biology Dominique Adriaens -- Department of Biology | 4 | c | | A:J | 100 |
| 9 | H002330 Internship C: Chemistry Katrien Strubbe -- Department of Chemistry | 4 | c | | A:J | 100 |
| 10 | H002335 Internship C: Physics Philippe Smet -- Department of Solid State Sciences | 4 | c | | A:J | 100 |
| 11 | H002339 Internship C: Geography Nico Van de Weghe -- Department of Geography | 4 | c | | A:J | 108 |

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 Veerle Segers -- Department of Movement and Sports Sciences | 4 | | | A:2 | 120 |

| | | | | | | | |
|----|---------|--|---|---|---|-----|-----|
| 2 | H001838 | Culture, Media and Education Kris Rutten -- Department of Educational Studies | 4 | | | A:2 | 120 |
| 3 | H002128 | Methods to Facilitate Socratic Group Discussions in the Educational Context Veerle Provoost -- Department of Philosophy and Moral Sciences | 4 | | | A:2 | 120 |
| 4 | H002213 | Motivational Psychology Maarten Vansteenkiste -- Department of Developmental, Personality and Social Psychology | 5 | | | A:1 | 150 |
| 5 | H002344 | Linguistic Proficiency in Content and Language Integrated Learning: Dutch Bart Deygers -- Department of Translation, Interpreting and Communication | 3 | b | 2 | A:2 | 90 |
| 6 | H002247 | Linguistic Proficiency in Content and Language Integrated Learning: English [en] June Eyckmans -- Department of Translation, Interpreting and Communication | 3 | b | 2 | A:2 | 90 |
| 7 | H002248 | Linguistic Proficiency in Content and Language Integrated Learning: French [fr] Pascale Hadermann -- Department of Linguistics | 3 | b | 2 | A:2 | 90 |
| 8 | H002249 | Linguistic Proficiency in Content and Language Integrated Learning: German [de] Gunther Martens -- Department of Literary Studies | 3 | b | 2 | A:2 | 90 |
| 9 | H002246 | Theory and Practice of Content and Language Integrated Learning Ulrike Vogl -- Department of Linguistics | 3 | a | 1 | A:1 | 90 |
| 10 | H002283 | Teaching Methodology: General Subjects for Technical and Vocational Education, including Internship Katrien Strubbe -- Department of Chemistry | 6 | | | A:2 | 160 |

2.4.2 Module 2: Additional Course Teaching Methodology

Subscribe to a Teaching Methodology Course other than chosen in the Programme Pathway Teaching Methodology and depending on the bachelor degree.

- Bachelor in de bio-ingenieurswetenschappen: 6 credit units with reference f, g, h or i. The course unit with reference j can only be taken if in the Programme Pathway Teaching Methodology, 'Teaching Methodology Mathematics I' is taken prior or concurrently.
- Bachelor in de bio-ingenieurswetenschappen: Main Subjects/Majors 'bos- en natuurbeheer', 'bos- en waterbeheer' or 'land, water en klimaat': 6 credits with reference f, g, h, i or k. The course unit with reference j can only be taken if in the Programme Pathway Teaching Methodology, 'Teaching Methodology Mathematics I' is taken prior or concurrently.

- Bachelor in de biowetenschappen: 6 credit units with reference g or h

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 Hendrik Van Maldeghem -- Department of Mathematics: Algebra and Geometry | 6 | f | | A:J | 180 |
| 2 | H002220 Teaching Methodology: Biology Dominique Adriaens -- Department of Biology | 6 | g | | A:J | 180 |
| 3 | H002219 Teaching Methodology: Chemistry Katrien Strubbe -- Department of Chemistry | 6 | h | | A:J | 180 |
| 4 | H002224 Teaching Methodology Physics Stefaan Cottenier -- Department of Electromechanical, Systems and Metal Engineering | 6 | i | | C:J | 180 |
| 5 | H002227 Teaching Methodology: Mathematics II Hendrik Van Maldeghem -- Department of Mathematics: Algebra and Geometry | 6 | j | | J:J | 168 |
| 6 | H002222 Teaching Methodology: Geography Nico Van de Weghe -- Department of Geography | 6 | k | | J:J | 180 |

2.4.3 Module 3: Additional Internship

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

The master's dissertation is selected in accordance with the domain-specific master's programme. If the master's dissertation encompasses 18 or 21 credits in the domain master, the master's dissertation in the Master of Science in Teaching in Science and Technology is 24 credits. If the master's dissertation encompasses 30 credits in the domain master, the master's dissertation in the Master of Science in Teaching in Science and Technology is 30 credits.

| Nr | Course | CRDT | Ref | MT1 | Session | Study |
|----|-------------------------------|------|-----|-----|---------|-------|
| 1 | I002583 Master's Dissertation | 24 | | | A:J | 720 |
| 2 | I002584 Master's Dissertation | 30 | | | 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 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 |