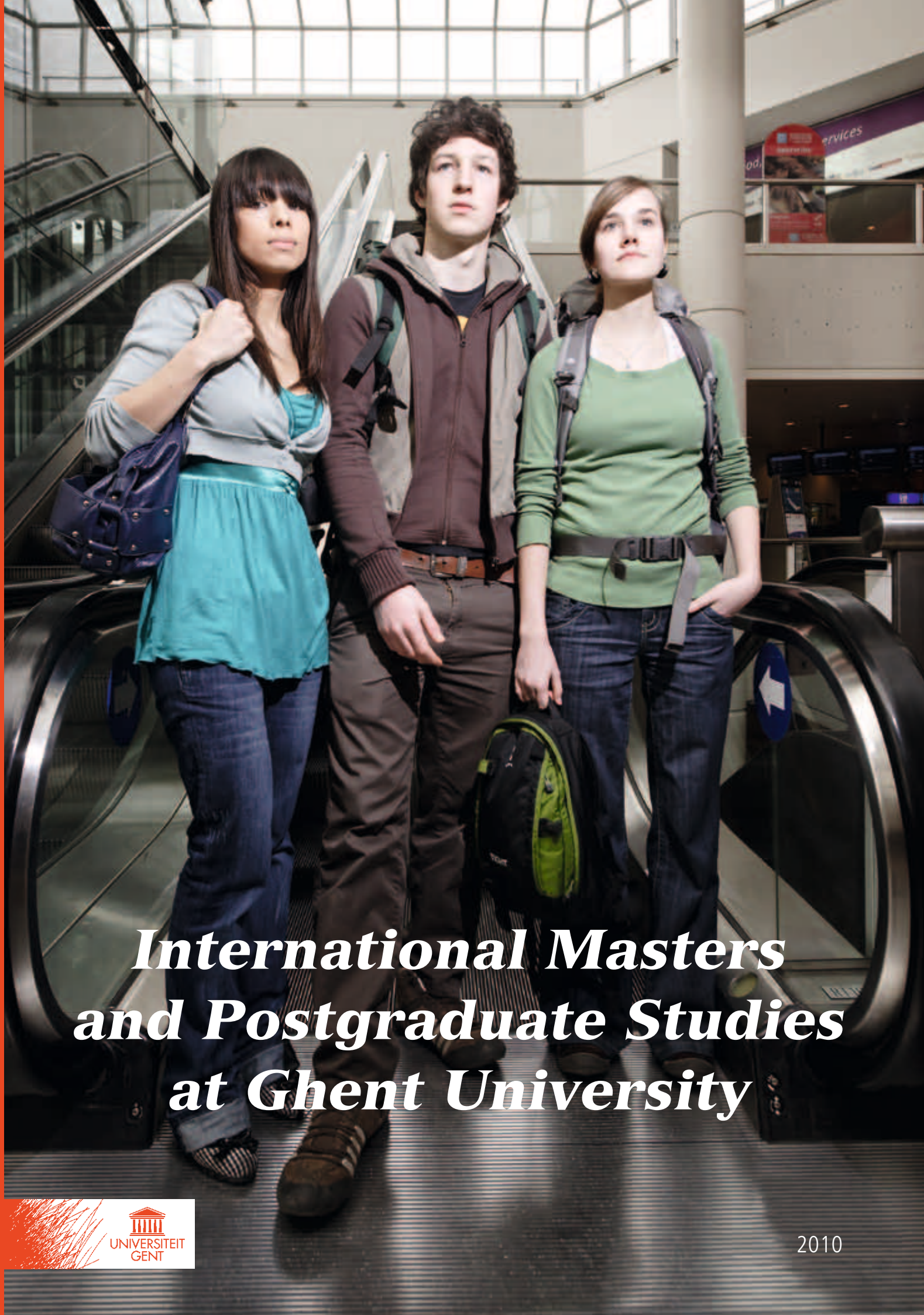

International Masters and Postgraduate Studies at Ghent University

UNIVERSITEIT GENT

2010

Information in this brochure has been updated in November 2009

Introduction

This brochure presents a compilation of the International Masters and the English postgraduate studies of Ghent University (Belgium).

Information is provided on the objectives and the content of each international programme as well as details regarding the entrance requirements, the place of lectures, useful addresses, tuition fees, etc.
The tuition fee mentioned with each master may vary slightly from year to year.

Besides these programmes, there are also a limited number of English courses available within the framework of continuing education (see online course catalogue, classified per faculty).

- Most masters have their own website with specific information (the address can be found with each master in this brochure).

- Information on the content of the programmes can be found in the online course catalogue of Ghent University (www.UGent.be > English > ... for degree students > quick link: course catalogue).

Attention: In the course catalogue **all** study programmes have been translated into English on behalf of international students and researchers. However, this does not mean that the language of instruction is automatically English as well; it is either Dutch or English. The courses mentioned in this brochure are entirely taught in English.

More information

Ghent University
International Admissions Desk
Office for Student Administration and Study Programmes
Sint-Pietersnieuwstraat 33 (Ufo), B-9000 Gent - Belgium
T +32 (0)9 331 00 99 - f +32 (0)9 331 01 46
internationalstudents@UGent.be
www.UGent.be/admission

Low Countries Studies

Low Countries Studies is a programme for exchange students and other foreign students and researchers who are already studying or working as a researcher at Ghent University and who want to learn more about Flanders, Belgium and the Netherlands. The students are given a broad overview of various aspects of Flemish society and everyday customs in Flanders.

- More information: www.lowcountries.UGent.be/

Glossary

Academic bachelor degrees

Bachelor programmes comprise 180 ECTS credits (3 years). Successful students are awarded the degree of bachelor.

Academic master degrees

comprise either 60 ECTS credits (1 year), 120 ECTS credits (2 years), 180 ECTS credits (3 years) or 240 credits (4 years).
Master programmes build further on the knowledge acquired during the appropriate bachelor degree, bringing the student to an advanced level of knowledge and competences in a specific field of study. The programme is concluded by a master's dissertation: an important part of the assessment. Successful students are awarded the degree of master.

Advanced master degrees

comprise 60 ECTS credits (1 year) and provide high standard specialization opportunities for holders of a particular master degree. They aim at deepening the knowledge and/or competences in a certain field of study.
These programmes are open to students who hold a master degree or a four year bachelor degree; a preparatory course may be required. The programme is concluded by a master's dissertation; an important part of the assessment. Successful students are awarded the degree of master.

Postgraduate studies

Postgraduate studies are study programmes of minimum 20 ECTS credits.
They constitute study and learning paths intended to enable students to explore the competences acquired upon completion of a bachelor's or master's study, in greater depth and scope, as part of their further professional training. Successful students are awarded a postgraduate certificate, in some cases conferring a legally recognized professional qualification.

Erasmus Mundus

Erasmus Mundus Master Courses are high-quality course programmes at Master level, which were selected for funding by the European Commission. Each course programme is offered by a consortium of universities which are situated in different European countries. Students of an Erasmus Mundus Master Course study in at least two of these countries. After successfully completing the programme students are awarded a recognized double, multiple or joint diploma.

International Course Programme - ICP

Master programme organised by Ghent University and the Flemish Interuniversity Council (VLIR-UOS). All programmes take up two academic years and lead to an MSc. degree. These courses focus on specific problems of developing countries.

Credits

Credits are based on ECTS-principles. At Ghent University 60 credits constitute a fulltime programme of approximately one academic year. One credit equals 25 (max. 30) hours of education, study and assessment activities.

Master of American Studies

Organised jointly by Ghent University, Katholieke Universiteit Leuven, University of Antwerp and Vrije Universiteit Brussel

Course content

Perhaps the most important international relationship of the 21st century is being forged today between the European Union and the United States. On every major issue, from economics over defence planning to social policy, the agreements and the differences between Europe and the U.S. are felt not just on these two continents, but around the world. Increasingly, policymakers on both sides of the Atlantic are finding that a keen understanding of history, the values and the social context of the other are essential requirements to successful discussion, negotiation and joint undertakings in culture, business and government between Europe and America. The Master in American Studies offers complete and up-to-date information on the United States.
By offering a diverse range of courses, the MA program seeks to present a balanced picture that allows you to reach a more encompassing, in-depth understanding of the country and its culture. With a total of 8 courses, ranging from law and economics to history, politics and various expressions of culture, in addition to a final thesis, this full-time program allows students both to develop an overview and to zoom in on specific topics.

Course structure

The four organising universities (Antwerp, Ghent, Louvain and Brussels) collaborate to offer courses that are unique to the program. The Master consists of eight courses (four per semester), half of which are situated in the field of 'American Culture'. The topics of these cultural courses may vary from one year to the next. In addition, all students take the following four core courses: *The Contemporary American Economy; American Law and the American Legal System; American Political Institutions; American History*. In addition to meeting the eight specific course requirements students also write a final research paper on a topic of their choice within the subject area of the program.

> Master dissertation

The master dissertation is a requirement for every candidate to obtain a master degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review part, a theoretical reflection and an original analysis of the topic. The master dissertation will consist of 10,000 – 12,000 words and is worth a third of the marks of the whole degree.

Career perspectives

The MA in American Studies is tailored to everyone who stands to profit from a better understanding of the USA for their future careers, whether as a journalist, interpreter, diplomat, academic or employee of an American company. Students with a special interest in the States but without any professional ambitions in this direction are of course also cordially invited.

Contact

Ghent University
Faculty of Arts and Philosophy - English Department
Prof. Gert Buelens
Rozier 44, 9000 Gent - T + 32 (0)9 264 37 00
Gert.Buelens@UGent.be

University of Antwerp
Department of Literature
Prof. dr. Bart Eeckhout (program coordinator)
Prinsstraat 13, room D.139, 2000 Antwerp
T + 32 (0)3 220 43 29 - Bart.Eeckhout@ua.ac.be

Center for American Studies – Royal Library
Ms. Myriam Lodeweyckx
Keizerslaan 4 (Boulevard de l'Empereur),
1000 Brussels - T + 32 (0)2 519 55 23 - cas@kbr.be

Information about program and online application:
www.kbr.be/cas/AmericanStudies/ma_program.html

Master of American Studies

60 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Students can apply if they have an initial Belgian master's degree (or 'licentiaat') or a non-Belgian degree that is granted after a minimum program of four year s of full-time study.

LANGUAGE
Candidates have to pass an initial English test (TOEFL or IELTS) as well as an oral and written proficiency test that is organized in-house.

The following students are exempted from this obligation:
- Belgian students who hold a degree in Germanic Languages and Literatures including English;
- Belgian students who hold a degree in translation or interpreting including English;
- Native speakers of English.

Further exemptions at the discretion of the program director.

The necessary minimum score is 600 on the paper-based/institutional TOEFL test or 250 on the external computer-based TOEFL test, or 7.5 on the IELTS. An in-house TOEFL test (followed by the oral and written proficiency test) will be held at the Center for American Studies in Brussels. Earlier TOEFL or IELTS results may be used, but the on-site interview and writing test remain compulsory. Off-site interviews and writing tests can only lead to a provisional acceptance into the program and need to be validated through an on-site interview and writing test upon arrival in Belgium. If the latter are deemed insufficient the student may still be refused entry into the program.

PRACTICAL INFORMATION

APPLICATION DEADLINE
Applications for holders of non-Flemish degrees are threefold:
- fill in the online application form on: www.kbr.be/cas/AmericanStudies/ma_program.html
- send the required documents conform the administrative procedure for international students of the coordinating university (University of Antwerp), before the application deadline mentioned on www.ua.ac.be/en
- take the on-site interview and writing test (if you reside within Belgium, appointments via the program administrator).

ENROLLING INSTITUTION
Only after receipt of a letter of acceptance students can be enrolled at University of Antwerp.

TUITION FEE
Min € 750 and max € 2,000 (no extra costs other than course materials)

SCHOLARSHIPS / GRANTS
Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government

START/END OF THE PROGRAMME
One year programme
Start academic year: last week of September

STUDYPROGRAMME

GENERAL COURSES	**40**
The Contemporary American Economy	5
American Law and the American Legal System	5
American Political Institutions	5
American History through European National Stereotypes	5
Culture 1: The American Way of Religion	5
Culture 2: New York City in Fiction, 1975-2000	5
Culture 3: Popular America: America in Popoular Literature and the Movies	5
Culture 4: Race and Ethnicity in Contemporary American Culture	5
MASTER DISSERTATION	**20**

Master of Advanced Studies in Linguistics

MAIN SUBJECTS: COGNITIVE AND FUNCTIONAL LINGUISTICS • INTERDISCIPLINARY LINGUISTICS • MULTILINGUAL AND FOREIGN LANGUAGE LEARNING AND TEACHING • LINGUISTICS IN A COMPARATIVE PERSPECTIVE

Organised jointly by Ghent University, Katholieke Universiteit Leuven, University of Antwerp and Vrije Universiteit Brussel

Course content

The Master of Advanced Studies in Linguistics is a one-year interuniversity programme aimed at students who have already acquired a good background in linguistics or language-related fields of study. The participating Flemish institutions are Ghent University, Katholieke Universiteit Leuven, University of Antwerp and Vrije Universiteit Brussel.

Course structure

Students choose four courses (of 6 credits each): one or two from the set of general courses; two or three specialization courses (with at least two from one specific area of specialization, which will also be the area of the master dissertation and of the intensive course work and/or apprenticeship in the 2nd semester). If only one general course is taken, a third specialization course may be chosen from the set listed for a different area of specialization, provided that there is a clear link and the local coordinator at the university of enrollment agrees.

- Linguistics in a Comparative Perspective – Ghent University
- Cognitive and Functional Analysis – Katholieke Universiteit Leuven
- Interdisciplinary Linguistics – University of Antwerp
- Multilingual and Foreign Language Learning and Teaching – Vrije Universiteit Brussel

Students may enroll at the university of their choice, in keeping with their preferred area of specialization. It is possible to follow courses from the other participating universities since there is a close co-operation between the different universities.

> Master dissertation

The master dissertation is a requirement for every candidate to obtain a master degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a critical bibliography review part, a theoretical reflection and an original analysis of the topic.

Career perspectives

This master's programme is not labour market oriented; it is an excellent preparation for students who want to start a research project (PhD) in the field of linguistics.

Contact

Ghent University
Faculty of Arts and Philosophy – English Department
Prof. Mieke Van Herreweghe
Rozier 44, 9000 Gent - T + 32 (0)9 264 37 90
Mieke.VanHerreweghe@UGent.be

Student's Administration
Arlet Renneboog
Arlet.Renneboog@UGent.be

Master of Advanced Studies in Linguistics

60 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

The students have a Master in Linguistics or in Linguistics and Literature, or equivalent, and have successfully submitted a master dissertation on a linguistic topic.

For non-Flemish degrees:
Students who have a Master in Linguistics or in Linguistics and Literature or equivalent and who have successfully submitted a master dissertation on a linguistic topic.

For Flemish degrees:
The exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE
At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:
- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
- a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
- certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.

The following students are exempted from the language requirement:
- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE
General deadlines:
- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION
Students enroll at the university of their choice, in keeping with their preferred area of specialization. It is possible to follow courses from the other participating universities since there is a close co-operation between the different universities.

TUITION FEE
- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS
- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME
One year programme.
Start academic year: last week of September.

Master of Advanced Studies in Linguistics

STUDYPROGRAMME	
GENERAL COURSES	**6/12**
One or two courses so that the curriculum amounts to 60 credits:	
Computational Tools for Linguistics	6
Corpus Linguistics	6
Language Data and Linguistic Objects	6
Linguistics and Neurosciences	6
Linguistic Typology	6
Theory and Praxis of Discourse Analysis	6
Psycholinguistic Methods and Language Acquisition	6
Theory Formation in Synchronic and Diachronic Linguistics	6
MAIN SUBJECTS	**24/30**
LINGUISTICS IN A COMPARATIVE PERSPECTIVE (UGENT)	
Linguistic Research in a Comparative Perspective: intensive course	12
Diachronic Comparative Linguistics	6
Language Variation and Change	6
Contrastive Linguistics: Syntax and Lexicon	6
Contrastive Linguistics: Semantics and Pragmatics	6
COGNITIVE AND FUNCTIONAL LINGUISTICS (K.U.LEUVEN)	
Cognitive and Functional Linguistics: intensive course and/or apprenticeship	12
Comparison of Cognitive and Functional Theories, and their Position in the History of Modern Linguistics	6
Grammar: Theory and Description	6
Text Linguistics	6
Lexical Semantics	6
Usage-based Approaches to Language Change	6
INTERDISCIPLINARY LINGUISTICS (UA)	
Interdisciplinary Linguistics: intensive course and/or apprenticeship (Courses may also be chosen from *Master in Artificial Intelligence* and *Advanced Master in Language and Speech Processing*)	12
Pragmatics: Theoretical Perspectives applied to Language in the Public Sphere	6
The Pragmatics of Intercultural and International Communication	6
Linguistic Anthropology	6
Psycholinguistics: The Reading and Writing Process	6
Developmental Psycholinguistics	6
Multilingualism	6
Cognitive Artificial Intelligence	6
Automatic Text Understanding	6
Linguistic Theories and Artificial Intelligence	6
MULTILINGUAL AND FOREIGN LANGUAGE LEARNING AND TEACHING (VUB)	
Multilingual and Foreign Language Learning and Teaching: intensive course and apprenticeship	12
Approaches to Language Teaching and Learning for Multilingual Education	6
Applied Linguistics and Foreign Language Teaching	6
Language Contact and Language Planning	6
MASTER DISSERTATION	**24**

Postgraduate Studies in Logic, History and Philosophy of Science

Course content

The curriculum is meant for masters in philosophy as well as for masters in a specific science. To philosophers it offers an advanced technical schooling in the three disciplines mentioned in the title as well as in the application of these techniques to scientific disciplines - these form the necessary basis for reflection.
For other masters, the curriculum mainly aims at teaching them to apply the rather technical insights of the three meta-disciplines to their own discipline. So, as far as non-philosophers are concerned, the curriculum does not only aspire to form people who are able to do research in logic, history of science, and philosophy of science, relying on their previously obtained disciplinary training. It also seeks to form scientists who, thanks to a thorough training in the three meta-disciplines, perform better as scientists because they are able to locate presuppositions and to coin variants for them.

In the general courses, insights and techniques from logic, history of science, and philosophy of science are introduced in a systematic way. In the optional courses, these techniques are concretely applied to specific reading material and specific research tasks.

Course structure

In the first semester, the students select three of the four packages that are offered (totalling up to 18 ECTS): logic, history of science, philosophy of mathematics, and philosophy of science. In these courses, the basis of these disciplines is studied at an advanced level. The optional courses (24 ECTS), followed during the second semester, rely on those courses. The optional courses aim at an in-depth exploration, in agreement with the contemporary international state of the art, of certain topics for which competent teachers are available. The fact that the students select three packages during the first semester enables them to combine the distinct viewpoints in performing the tasks required for the optional courses. Half of the study load is assigned to the C category, which makes it possible to assign to each student specific tasks that depend on the students earlier training and current aims. This also makes it possible to impose on the students the high demands made necessary by the intensive training that the curriculum aspires to offer.

> Dissertation

The dissertation (18 ECTS, 50 to 70 pages) comes to the equivalent of two publishable papers – the aim is actually to arrive at published papers. The structure of the curriculum allows for a good preparation of the (limited number of) students to the dissertation.

Contact

Ghent University – Faculty of Arts and Philosophy
Department of Philosophy and Moral Science
Prof. dr. Erik Weber
Blandijnberg 2, 9000 Gent
Erik.Weber@UGent.be
http://logica.ugent.be/centrum/postgrad.html

Candidates should contact prof. dr. E. Weber.

Postgraduate Studies in Logic, History and Philosophy of Science

60 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

A diploma of master (transformed curricula)
- a diploma of an academic training of the second cycle (old structure)
- a diploma of the second cycle of the two cycle higher education (old structure)

All candidates are expected to have an excellent motivation and a broad interest for methodological problems.

LANGUAGE

At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:
- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
- a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
- certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.

The following students are exempted from the language requirement:
- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE

General deadlines:
- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION

Ghent University

TUITION FEE

€ 58,80

SCHOLARSHIPS

- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME

One year programme
Start academic year: last week of September.

Postgraduate Studies in Logic, History and Philosophy of Science

STUDYPROGRAMME

GENERAL COURSES	**18**
To be chosen from the following list:	
– Thorough Survey of Logic	6
– Thorough Survey of the Scientific Methodology	3
– Thorough Survey of the Philosophy of Physics	3
– Thorough Survey of the Philosophy of Mathematics	6
– History of Science: Conceptions, Methods and Problems	6
ELECTIVE COURSES	**24**
To be chosen from the following list:	
– Adaptive Logics applied to the Philosophy of Science	4
– Logic and Artificial Intelligence	4
– Formal Languages - From Theory to Practice	4
– Three-Valued Logics for Software Specification	4
– Fuzzy Sets and Approximate Reasoning	4
– Contextual Approaches to Epistemology	4
– Historical and Contemporary Theories of Vision: Perspectives and Perception	4
– Scientific Explanation	4
– Cultural Context of Knowledge: Perspectives from the Philosophy of Science	4
– Foundations of Science from a Political and Societal Perspective	4
– Finitistic Philosophy and Foundations of Mathematics	4
– Scientific Discovery and Creativity	4
– History and Philosophy of Biology	4
– Historical Applications of Contemporary Philosophy of Science	4
– From Copernicus to Newton: Problems from the First Scientific Revolution	4
– Science in its Historical Context (Middle Ages and Early Modern Period)	4
MASTER DISSERTATION	**18**

Master of Advanced Studies in European Law

Course content

The Master of Advanced Studies in European Law is dedicated to the legal environment of the European Union. That environment consists of EU-law as such, but also of international law and of member state law. Through a combination of these fields, the programme uniquely offers an in-depth study that encompasses relevant branches of contemporary law, within the context of the EU. As far as member state law is concerned, emphasis is put on a comparative approach that fathoms for common characteristics and possible harmonisation.
The LLM-programme's mission is to provide each student the opportunity to pursue, in his or her field of preference, both introductory and advanced studies of the law in the European Union. With an ever expanding and further integrating European Union, and in an ever more global legal environment, it offers an additional law degree that is instrumental for today's lawyers around the world.

Course structure

Students need to obtain 60 credits, over a period of two semesters. There is great flexibility in shaping one's own curriculum.
Only 9 credits cover compulsory courses, all of which are supporting courses,dealing mainly with various skills for lawyers. Students are also required to write a 15 credit LLM-paper in connection with one of their classes.

The bulk of the credits is filled with elective courses on a variety of topics from the following fields: European Law, Private Law in Europe, Economic and Social Law, Environmental Law, Transport Law, Public International Law, Criminal Law and Criminology .

Students can choose from approximately forty different courses, all of which are exclusively taught in English. Teaching is generally done interactively, requiring advanced reading and class participation. The programme typically hosts several internationally reputed guest professors.

Organised social activities are an important part of the LLM-experience, and not all are extracurricular. Curricular activities include guided visits to important EU and international institutions, and participation in several colloquia.

> Master dissertation

The master dissertation is a requirement for every candidate to obtain a master degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor.

Career perspectives

The programme enables the student to greatly enhance his or her chances when applying for an international legal job.

Contact

Ghent University – Faculty of Law

Department of Social Law
Director: Prof. dr. Marc De Vos
Universiteitstraat 4, 9000 Gent
T +32 (0)9 264 68 45
marc.devos@UGent.be

Department of Economic Law
Adjunct Director: Prof. dr. Hans De Wulf
T +32 (0)9 264 68 26
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International Relations Officer
Veronique Christophe
T +32 (0)9 264 67 76
veronique.christophe@UGent.be

www.law.UGent.be/llm/

Master of Advanced Studies in European Law

60 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Students are eligible for admission if they fulfil the following admission criteria:
To have a law degree, i.e. the degree that - in its country of origin - is required for the exercise of the legal professions. Students who are graduating may apply and can be conditionally admitted, subject to the successful completion of their degree.
Exceptionally, after an examination of their curriculum and in view of their acquired competences, candidates may be admitted who do not have a law degree. In such case, the admission may be made subject to limitations with respect to the courses to be followed.

LANGUAGE
At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:
- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
- a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
- certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.

The following students are exempted from the language requirement:
- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE
The original application form accompanied by the required documents should reach the Ghent Law Faculty before May 1 of the year preceding the academic year you are applying for. Early applications are recommended and will be decided upon in February and March. Applications received after May 1 will only be considered if the number of students admitted previously permits additional students. Applicants must be aware of the limited number of places available and should ensure ample time for visa requirements and other preparations.

ENROLLING INSTITUTION
Ghent University
www.law.UGent.be/llm/

TUITION FEE
Subject to approval by the university board of directors, € 4250 (+ personal costs e.g. study visits to European/international organisations).

SCHOLARSHIPS
- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME
One year programme.
Start academic year: last week of September.

Master of Advanced Studies in European Law

STUDYPROGRAMME	
GENERAL COURSES	**9**
Skills for Lawyers	3
European Law: the Basics	3
Seminar: Foreign Chair	3
ELECTIVE COURSES	**36**
(Up to 6 credits can be taken from the list "Other Elective Courses")	
EU Enlargement and Proximity Relations	5
EU Trade Policy	5
European Union Competition Law	6
European Union Internal Market Law	6
European Union Judicial Protection Law	6
European Union Institutional Law	6
European Union External Relations	6
EU External Relations: Selected Topics	5
European Constitutional Law: Case Studies	5
EU Social Law and International Employment	5
European Labour and Employment Law	5
European Banking and Capital Markets Law	5
International Commercial Transactions	5
EU Justice and Home Affairs	5
The Law of European Mergers and Acquisitions	5
European Company Law and Corporate Governance	5
Human Rights in Europe	5
European Contract Law	5
European and International Environmental Law	5
Contemporary Issues in European and Comparative Law	3
OTHER ELECTIVE COURSES	
International Commercial Arbitration	3
European Media Law	3
Transport Law	3
European and Comparative Discrimination Law	3
Maritime Transport Law	3
Transport Insurance Law	3
Law of the Sea	3
European and International Biodiversity Law	3
Contemporary Issues of Public International Law	3
European Criminal Justice Systems	3
European Criminal Policy	3
Penal Systems in Europe	3
Organised Crime in Europe	3
Comparative Methodology in European Criminology	3
MASTER DISSERTATION	**15**

European Master in Law and Economics

Erasmus Mundus Master Programme jointly offered by Ghent University and partners

Organising institutes

The joint programme of European master in Law and Economics is offered by the following universities: Aix-en-Provence (France); Bologna (Italy); Ghent (Belgium); Haifa (Israel); Hamburg (Germany); Manchester (United Kingdom); Rotterdam (The Netherlands); Vienna (Austria).
In addition, there are bilateral exchange agreements between the Universities of Hamburg and the George Mason University School of Law in Arlington, Virginia on one hand, and the University of Rotterdam and the University of California at Berkeley on the other hand.

Course content

This programme offers the unique opportunity for interdisciplinary studies of law and economics at two or even three European and non-European universities. The programme provides students with an advanced understanding of the economic effects of divergent laws.

Globalisation and interdisciplinarity are two key concepts in university education at the beginning of the 21st century.
For law students knowledge of the specific regulations of their home country is too narrow a base for counseling firms that are active in interstate trade. Additionally, knowledge of the economic effects of legal rules has become indispensable for understanding their clients' commercial needs.
Similarly, economics students will profit from an accurate understanding of the institutional legal framework of market economies. For both lawyers and economists, knowledge of the other discipline and international contacts are crucial for a successful future career.

Borders in Europe are becoming less and less meaningful. For law studies, internationalisation creates a specific problem. Due to the increasing importance of specific regulations regarding areas such as social security, industrial policy, protection of the environment, equal treatment of minority groups etc., the legal systems in the different European countries became increasingly divergent.
By the evolution of the law, the traditional common standards for comparative law are becoming less and less relevant. New standards of comparison seem to be necessary.

The economic analysis of law, often briefly called 'law and economics', is certainly a good candidate as a standard for relevant comparison of law. Economics should be able to develop thoroughgoing and systematic insights about law, on the explanatory as well as on the normative level.
The scientific interest of economists in law is not new. Many economists used to pay great attention to legal rules concerning economic competition, the regulation of prices, the labour market and international trade. In the USA a new discipline, in which economics were systematically applied to all branches of law, emerged during the fifties. The American origins of the 'Law and Economics' tradition did not prevent its spread to Europe. In several European universities the 'law-and-economics-approach' was developed.

The Master in Law and Economics allow students to compare the legal institutions of their country, and to evaluate them on the basis of a solid analytical framework in the hope for a new European 'ius commune' in which insights of Law and Economics are to play an important role.

The study programme comprises three kinds of courses. In order to make law students more familiar with basic economic reasoning, some courses are more economic in orientation. Some courses deal with comparative law in order to internationalize the legal background of the students. Most courses deal directly with the economic analysis of the most important branches of private, public, international and European law.
The references to law in the courses will be of a comparative kind, due to the all-European character of the programme and the international composition of the audience.

Course structure

The programme covers one academic year, for which successful students will receive 60 ECTS points.
The academic year is divided into three terms. The unique international and interdisciplinary character of the EMLE Programme is secured through an intensive co-operation between lawyers and economists at no less than seven European Universities and three non-European partners. Students may study at up to three different universities but cannot spend all terms in the same location.

In the first two terms students can choose among three teaching centres.
In the first term courses will be offered at the Universities of Rotterdam, Hamburg and Bologna.
In the second term students will study at the Universities of Ghent, Hamburg or Bologna.
In the third term courses are offered in Aix-en-Provence, Bologna, Haifa, Hamburg, Manchester, Rotterdam and Vienna.

Bilateral exchange agreements exist between the University of Hamburg and the George Mason University School of Law in Arlington, Virginia (1st term), as well as between the University of Rotterdam and the University of California at Berkeley (3rd term).

> Master dissertation

The master dissertation is a requirement for every candidate to obtain a master degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a critical bibliography review part, a theoretical reflection and an original analysis of the topic.

Career perspectives

Law and economy interact in many ways.

Private law assists individuals and groups willing to enter into agreements in a free market. Public law seeks to correct the outcomes of a free market system by means of economic and social regulation.

Economists should be informed about the legal environment in which economic activities must be conducted. Lawyers should be aware of the economic effects of current legal rules and the expected outcome under a different legal regime.

The master programme prepares students for a professional career, for example, in public organisations, in multinational law firms or consultancy firms. Graduates are also well prepared for doctorate research in a PhD programme.

European Master in Law and Economics

60 ECTS CREDITS • FULL-TIME OR PART-TIME • LANGUAGE: ENGLISH • DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Preference will be given to applicants who already have a first master degree. The minimum requirement for admission is a bachelor degree, provided that this degree leads to employability in the relevant labour market. In particular with respect to the legal profession, stricter job qualifying criteria (first master degree) may be required by national regulations. Applicants with a bachelor degree only need to provide proof that this degree is an appropriate level of qualification for the labour market in their home country.
Besides graduates in Law or Economics, applicants with a first degree in business administration or in social sciences may also apply under the condition that the completed study programme includes a substantial number of courses in law and/or economics. The above requirement with respect to employability in the labour market equally applies. There is a separate application procedure for European Students and for Third Country Students.
For Flemish degrees:
The exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE

At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:

- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
- a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
- certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.
The following students are exempted from the language requirement:

- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE

European Students and Third Country Students have a different application procedure and deadlines.
More information can be found on the website or can be obtained by sending an e-mail:

- for European students please send an e-mail to applicationeurope@emle.org
- for Third Country Students, please send an e-mail to applicationthirdcountry@emle.org
  www.emle.org

ENROLLING INSTITUTION

The registrating institution is different for European Students or Third Country Students. Please check the website for more details.

TUITION FEE

- European students: € 4,500
- Non-European students: € 8 500

SCHOLARSHIPS

- for non-EU students: Erasmus Mundus grants
- for EU-students: a limited number of tuition grants

START/END OF THE PROGRAMME

Starts with the beginning of the academic year (depending on entry institute).

STUDYPROGRAMME

GENERAL COURSES	**42**
First trimester: Bologna, Hamburg, Rotterdam	
Second trimester: Bologna, Ghent, Hamburg	
Ghent courses:	
Methodology and Selected Topics	3
Economic Analysis of Environmental Law	4
Economic Analysis of Property Law	5
Economic Analysis of Contract Law	4
One course out of:	
Philosophy of Law and Economics	4
Corporate Law & Economics	4
Third trimester: Aix-en-Marseille, Bologna, Haifa, Hamburg, Manchester, Rotterdam, Vienna	
MASTER DISSERTATION	**18**

Contact

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www.emle.org

Master of Banking and Finance

Course content

The goal of this Master of Banking and Finance is to form experts who are able to perform analyses of financial problems and institutional developments within a sound theoretical and quantitative framework. The MBF-programme should enable them to apply state-of-the-art techniques to problems in banks or other financial intermediaries and to formulate and implement innovative solutions.
Working in the financial sector is becoming much more demanding, but also very exciting. The deregulation of financial markets has opened many opportunities for financial service companies, investors, borrowers, as well as for the supervisory authorities. The financial sector needs economists with a thorough micro- and macrofinancial training and who have mastered quantitative management techniques for modern financial services companies. Young people with this focus will be the leading executives of the future.

Course structure

Thorough understanding of the complex relationships and dynamics of financial markets and institutions requires insight in many disciplines. Knowledge about the organisation of financial markets and the pricing and risk characteristics of financial assets is not sufficient, if it is not supplemented by awareness of macroeconomic and monetary concepts. Moreover, the quan-titative nature of finance also requires a sound command of econometrics and data processing skills.
It is precisely the need of the financial community for people who are able to combine these economic, financial and quantitative skills that is the core of the MBF-programme. A young, international team of teachers and researchers offers courses in fields such as monetary economics, banking, microeconomics of financial markets, investment analysis, financial econometrics, risk management, strategy of financial firms. The graduation project is designed to analyse and solve complex but real-world financial problems, always in close collaboration with banks or asset managers.

> Master dissertation

The master dissertation is a requirement for every candidate to obtain a master degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review part, a theoretical reflection and an original analysis of the topic.

Career perspectives

The Master programme is intended for economists with a background in finance and who feel the need for a serious in-depth training in finance and banking. Students graduating from this programme will probably feel at ease in functions or departments such as:
- investment analysis;
- risk management units of financial and corporate organisations;
- asset and liability management units of financial intermediaries;
- research department of a central bank or government agency;
- financial consulting firms;
- supervisory bodies for financial markets and institutions;
- university or research departments;
- …

Contact

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www.feb.ugent.be/fineco/mbf/

Master of Banking and Finance

60 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Foreign students can apply if they have a four-year bachelor degree. Admission is dependent on the study results of the student and the subjects taken. The target group consists of masters in economics, applied economics, commercial engineer with sufficient initial education in financial economics, investment analysis and econometrics. Flemish students should already have an initial Flemish master degree.

LANGUAGE
At enrolment for this English study programme you must give evidence of a good command of English by submitting one of the following:
- a TOEFL-TEST, maximum two years old, with a score of 560-676 (paper-based), or 110-119 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a score of 6.5 or 7.0 or higher;
- a certificate awarded by the UCT confirming proficiency in English (CEF-level C1);
- certificate of practical English 6, Advanced Academic English, awarded by the UCT (University Language Centre);
- certificate C1 of an university language centre.

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.
The following students are exempted from the language requirement:
- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE
General deadlines:
- for students who need a visa: 1st of February
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION
Ghent University

TUITION FEE
- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS
- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME
One year programme.
Start academic year: last week of September.

MASTER

GENERAL COURSES	**40**
Management of Financial Institutions	6
Advanced Investment Analysis	6
Economics of Financial Markets	5
Financial Risk Management	6
Financial Econometrics	4
Microeconomics of Banking and Financial Markets	4
Strategy and Organisation of Financial Institutions	3
Topics in Empirical Research in Finance	3
International Banking and Financial Markets	3
ELECTIVE COURSES	**3**
Topics in Advanced Corporate Finance	3
Monetary Economics	3
MASTER DISSERTATION	**17**

Master of Marketing Analysis

Course content

The goal of this specialized programme is to create specialists in the domain of marketing analysis to support business marketing strategy and marketing decisions of the firm.

The programme addresses the needs of companies for better-educated staff with strong skills in the domain of analytical customer relationship management and marketing analytics. Thanks to information technology and the availability of market data both at the demand side (customer information, e.g. scanning data …) and supply side (internal information about marketing actions, competitors ...), marketing as a discipline has evolved from a relatively qualitative to a more quantitative discipline. As a result, there is a strong need in the marketplace for people able to:

- control and cope with the huge amount of available data;
- generate and use models to translate these raw data into useful marketing information.

These people will be the interface between company management (e.g. product manager, marketing manager) and the suppliers of marketing data within the organisation. Currently, marketing departments are not facing the problem how to obtain marketing data, but rather how to transform these massive amounts of data into useful marketing information and systems.
More specifically, the focus of the programme is on **analytical customer relationship management**. We train students in the theoretical underpinnings but mainly in the practical skills of managing customer databases: (1) to systematically acquire new customers; (2) to grow existing customer relationships; (3) to prevent customers from lapsing (customer churn analysis); (4) to recapture 'lost' customers.

Course structure

There are two mandatory courses in the first semester. Besides this, the students choose three out of the four available optional courses. From January on, the number of courses decreases significantly, enabling participants to fully concentrate on the project.
Please visit the blog of our programme:
http://mmacrm.wordpress.com

> Master dissertation

The master dissertation of the Master of Marketing Analysis consists of a real-life project for a company dealing with a specific marketing issue. A list of previous projects can be obtained from: www.mma.UGent.be/Projects.htm

Career perspectives

The choice of engaging in a specific Advanced Master programme is, even more than a Master programme, related to the question: "Which job(s) will I be trained for?". Fortunately, there is a broad variety of jobs for which students are trained. About equal proportions of MMA, graduates are currently working in different aspects of the Marketing discipline, although the majority of functions are clearly analytical in nature. In order to offer potential students more insights into the variety of functions, companies, industries, and even countries where MMA-graduates are already present, some former students were very willing to share their experiences in this programme with – possibly – their future colleagues … Their testimonials can be found at www.mma.UGent.be/mma.pdf (see middle section).

Contact

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www.mma.UGent.be

Master of Marketing Analysis

60 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

The target group consists of students with strong analytical skills with an interest in marketing business problems with prior knowledge in statistics and market(ing) research. Prior knowledge of (or strong interest in) computer programming is a plus.

Flemish students should already have an initial Flemish master degree. Foreign students can apply if they have a four-year bachelor degree. Admission is dependent on the study results of the student and the subjects taken.

LANGUAGE
At enrolment for this English study programme you must give evidence of a good command of English by submitting one of the following:

- a TOEFL-TEST, maximum two years old, with a score of 560-676 (paper-based), or 110-119 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a score of 6.5 or 7.0 or higher;
- a certificate awarded by the UCT confirming proficiency in English (CEF-level C1);
- certificate of practical English 6, Advanced Academic English, awarded by the UCT (University Language Centre);
- certificate C1 of an university language centre.

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.
The following students are exempted from the language requirement:

- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English..

PRACTICAL INFORMATION

APPLICATION DEADLINE
General deadlines:

- for students who need a visa: 1st of February
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION
Ghent University

TUITION FEE

- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS

- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME
One year programme.
Start academic year: last week of September.

STUDYPROGRAMME

GENERAL COURSES	**18**
Advanced Topics in Marketing	5
Marketing Information Systems - Database Marketing	5
Analytical Customer Relationship Management	8
ELECTIVE COURSES	**21**
Marketing Models and Marketing Engineering	7
Advanced Methods of Market Research I	7
Advanced Methods of Market Research II	7
Strategic Brand Communications	7
MASTER DISSERTATION	**21**

Master of Science in Marine Biodiversity and Conservation

Erasmus Mundus Master Programme jointly offered by Ghent University and partners

Course content

Why Marine Biodiversity and Conservation?
The marine environment is a precious asset. Oceans and seas provide 99% of the available living space on the planet, cover 71% of the earth's surface and contain 90% of the biosphere and consequently a large share of global biological diversity. Marine ecosystems play a key role in climate and weather processes. Indispensable to life itself, the marine environment is also a great contributor to economic prosperity, social well-being and quality of life. However, the marine environment is facing a number of threats including loss or degradation of its biodiversity and changes in its structure, loss of habitats, contamination by dangerous substances and nutrients and impacts of climate change.

The EU-Marine Strategy provides an integrated framework for analyzing relevant Community policies' contributions to the protection of and the impact on the marine environment.
In order to obtain these goals, we need to have well trained people who are able to evaluate, understand and investigate the state of the marine environment, and this at different levels and from different disciplines such as general oceanography, ecology, chemistry, physics, statistics, geology, social sciences, economy, and aquaculture.

The ERASMUS MUNDUS MSc programme EMBC is strongly oriented to the fundamental understanding of the structure and function of marine biodiversity, the acquisition of several kinds of tools required for understanding the complexity of biodiversity patterns and processes, and finally to the application of this knowledge for nature conservation and restoration.

Course structure

The study programme is running for 2 academic years and is divided in 3 thematic modules:

- Understanding the structure and function of marine biodiversity (at least 24 ECTS) deals with the fundamental aspects of Oceanography (on a multidisciplinary basis, including physics, chemistry, geology, biology, ecology, biogeography, climate change), the structure and functioning of Marine Biodiversity (from genes to habitats) and with Impact studies.
- Toolbox for investigating marine biodiversity (at least 20 ECTS) provides an advanced training in Statistics and experimental design, Modelling, Taxonomy, Data and Information Management, Field observations and interpretation and Molecular methods.
- Conservation and Restoration of marine biodiversity (at least 10 ECTS) deals with the application of the above mentioned theories and methods in order to develop a sustainable use of the marine environment.

The EMBC-programme (2 years or 120 ECTS) is complemented with summer schools (6 ECTS) on specialized topics in European Marine Research Stations operating within the EU-Network of Excellence MarBEF. These summer schools are 3-4 weeks activities in the field (marine stations where SCUBA diving, snorkling, and other activities can be performed).

In the second year, a research project (Master thesis) of 30 ECTS is scheduled.

For the development of personal skills and skills in research project implementation (i.e. transferable skills), at least 10 ECTS are required and may include a training in the basic knowledge of the native language of the country of actual study period, training in scientific communication, research management, and this related to one or more of the topics in the thematic modules. Although the courses will be given in English, native language training will enhance social integration of the students in their host countries.

Elective courses (from other disciplines or organized within EMBC) can be chosen for 20 ECTS.

> Master dissertation

In the second year, a research project (Master thesis) of 30 ECTS is scheduled.
The master dissertation is a requirement for every candidate to obtain a masters' degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review part, a theoretical reflection and an original analysis of the topic.

Master of Science in Marine Biodiversity and Conservation

Career perspectives

The EMBC is strongly oriented to the fundamental understanding of the structure and function of marine biodiversity, the acquisition of several kinds of tools required for understanding the complexity of biodiversity patterns and processes, and finally to the application of this knowledge for nature conservation and restoration.

The EU-Marine Strategy provides an integrated framework for analyzing relevant Community policies' contributions to the protection of and the impact on the marine environment. This EU-Strategy is the basis for the national European authorities and policies at the one hand and is the basis for debate at the global scale regarding policies for Nature protection and Conservation in general. The EMBC Masters will be well trained to operate immediately within these policy environments. Most of them will use this Master as a basis for PhD research. Masters and Post-docs specialized in Marine Biodiversity and Conservation can help in the implementation of the strategies for future sustainable use of the natural marine resources taking into account the natural ecological background of the ecosystems. The added value for EMBC Masters will be that they can operate on a global scale since there is no restriction in the programme regarding types of biotopes (going from the coast to the deep sea and from poles to poles).

Contact

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Mr. Tim Deprez
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http://embc.marbef.orge

Programme mobility

The main difference and advantage of this Erasmus Mundus programme versus the Master in de mariene en lacustriene wetenschappen at Ghent University is the mobility and the co-operation between different leading universities.
The student will live and learn in at least two European cities and will receive a joint degree MSc programme run by six European universities:

- Ghent University (Belgium);
- University of Bremen (Germany);
- University of the Algarve (Portugal);
- University of Paris 6 (France);
- University of Oviedo (Spain);
- University of Klaipèda (Lithuania).

There is an obligatory mobility for at least one semester (30 ECTS) to one of the six partner universities.

Students will choose in the first year among three universities - Ghent, Bremen or Algarve - which are offering in the first semester mainly the basic multidisciplinary courses. For the second semester, each of these universities is organizing more specialized courses and will start with the scientific training in research projects.

In the second year, the students move to Paris, Oviedo or Klaipèda for the first semester. The second semester of the second year students can move again to the research institutes (including MarBEF institutes) where the thesis work is done.

Master of Science in Marine Biodiversity and Conservation

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: JOINT MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

For non-Flemish degrees:
The course is open to students with at least a Bachelor (or Master) degree in biology, ecology, environmental sciences, oceanography, marine sciences, geography, geology, or other equivalent degrees with minimum 180 credits.
For Flemish degrees:
The exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE

At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:

- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
- a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
- certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.
The following students are exempted from the language requirement:

- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE

- Non-EU-students (both those applying for an Erasmus Mundus grant and self-sponsoring): January 15
- Other students (EU-students): June 1

http://embc.marbef.org

ENROLLING INSTITUTION

Ghent University

TUITION FEE

- € 7000 (annually) for non-EU students
- € 3000 (annually) for EU-students

Weavers are possible for students with limited financial means.

SCHOLARSHIPS

- Erasmus Mundus grants
- A limited number of grants offered by the organising institutions (see website)

START/END OF THE PROGRAMME

Two year programme.
Start academic year: first week of September.

Master of Nematology

MAJORS: NEMATOLOGY APPLIED TO AGRO-ECOSYSTEMS • NEMATOLOGY APPLIED TO NATURAL ECOSYSTEMS • NEMATODE SYSTEMATICS (TAXONOMY, PHYLOGENY, BIODIVERSITY)
International Course Programme (ICP): Master Programme organised by Ghent University and the Flemish Interuniversity Council (VLIR-UOS)

Course content

Nematodes or roundworms are everywhere. They are among the most harmful organisms of crops, especially in the tropics, but on the other hand they are very promising as natural antagonists that can be used in bio-control programmes against pest insects. Because of their ubi-quitous presence, overwhelming densities and diversity (sometimes compared to insects) the free-living nematodes are an ideal tool for biodiversity studies. They are used as bio-indicators of pollution in both terrestrial and aquatic environments.
The programme of Master of Nematology is unique in the world and attracts students from all over the world. It deals with fundamental as well as applied aspects of Nematology and concerns all groups of nematodes in all possible environments: natural soils, agricultural soils, aquatic sediments of freshwater, brackish or marine habitats. It fulfils the international needs for training highly qualified nematologists with a multidisciplinary knowledge in the diverse fields of nematology. This English course programme is multidisciplinary in its approach both within the field of biology and agro-engineering.

Course structure

Basically, the programme consists of 40 credits for eleven compulsory general courses, 30 credits for the master thesis, 27 credits for the major of the student's choice and 23 credits for elective courses.
The first year starts with a series of eight compulsory general courses which provide the basic theoretical and practical information as well as a more in-depth and broader multidisciplinary knowledge of nematology. These courses level the knowledge and skills of the students with diverse background. In the second semester, the student follows the courses of the major of his/her choice. Each of the majors deals with fundamental and applied aspects of nematology.
The **Major Nematology applied to Agro-ecosystems** enables the student to understand how fundamental knowledge can be translated into solutions for agro-nematological problems and how to identify and use some parasitic taxa in bio-control. The **Major Nematology applied to Natural ecosystems** provides a balance between ecology and systematics of free-living nematode taxa from three main habitats (marine/estuarine, freshwater and terrestrial). With the knowledge and skills acquired in this major, the student is able to use e.g. nematode community composition data in the assessment of fundamental and applied ecological issues. The **Major Nematode Systematics** provides the requisite knowledge and skills for identification, classification and phylogeny of free-living and parasitic nematode taxa.
The second year of the master programme contains three compulsory courses, the master thesis and the elective courses.

> Master dissertation

The master dissertation is a requirement for every candidate to obtain a master degree. The master dissertation is an original piece of personal research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review, a scientific research often including experiments, analysis and discussion of the results, conclusion, summary and reference list.

Career perspectives

The Master of Nematology programme prepares the student for a career in very diverse environments. Their work can vary between teaching, research in universities and laboratories and providing advice services to the general public, farmers or governmental policies. The multidisciplinary approach allows nematologists to be active both in the field of biology and agro-engineering, work in sophisticated laboratories (molecular research) as well as in conditions where there is hardly any basic equipment as in some developing countries.
Main trumps are: in-depth and broad scientific knowledge, capacity to analyse and solve problems, write research proposals, good communication skills and contacts with national and international nematologists and centres of nematological research and applications.

Contact

Ghent University – Faculty of Science
Department of Biology
Postgraduate International Nematology Course (PINC)
Mrs N. Smol – Promotor: Prof. M. Moens
nic.smol@UGent.be
www.pinc.UGent.be

Master of Nematology

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Applicants must hold a university degree equivalent to at least 3 years of university studies in zoology, botany, agriculture, environmental sciences or a closely related field. Each application file will be screened by the Nematology Education Committee and must be approved by the Faculty and the Rector of UGent.

For Flemish degrees:
The exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE

At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:

- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
- a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
- certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.

The following students are exempted from the language requirement:

- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE

- For students applying for a VLIR-UOS scholarship:1st of February
- For students who require a visa: 1st of May
- For students who do not require a visa: before September 1

www.icp-itp.UGent.be

ENROLLING INSTITUTION

Ghent University

TUITION FEE

- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS

- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME

Two year programme.
Start academic year: last week of September.

Master of Nematology

MASTER (YEAR 1)

GENERAL COURSES	**28**
Nematode morphology	5
Nematode systematics and molecular phylogeny	5
General techniques in nematology	5
Molecular techniques in nematology	3
Data mining, processing and communication	3
General nematode biology and interactions	5
Statistics	3
Nematodes as model organisms	4
CLUSTERS	**27**

One of the following majors:

MAJOR: NEMATOLOGY APPLIED TO AGRO-ECOSYSTEMS

Entomopathogenic nematodes: taxonomy, biology, biocontrol	3
Systematics of plant-parasitic nematodes: Tylenchomorpha	6
Virus-vector families	4
Life cycle biology of the principle groups of plant-parasitic nematodes	4
Tropical plant nematology	4
Plant nematode behaviour and physiology	3
Molecular aspects of plant-nematode relationships	3

MAJOR: NEMATOLOGY APPLIED TO NATURAL ECOSYSTEMS

Systematics of free-living aquatic nematodes	7
Systematics of free-living terrestrial nematodes	6
Structural and functional biodiversity	4
Ecology of free-living aquatic nematodes	6
Biomonitoring	4
Systematics of free-living terrestrial nematodes (Dorylaimia)	6

MAJOR : NEMATODE SYSTEMATICS: TAXONOMY, PHYLOGENY, BIODIVERSITY

Entomopathogenic nematodes: taxonomy, biology, biocontrol	3
Systematics of plant-parasitic nematodes: Tylenchomorpha	6
Virus-vector families	4
Systematics of free-living aquatic nematodes	7
Systematics of free-living terrestrial nematodes (Dorylaimia)	6

MASTER (YEAR 2)

GENERAL COURSES	**12**
Biostatistics: experimental design	4
Strategies for research: project development and paper writing	3
Networking and seminars	5
ELECTIVE COURSES	**18**

Courses to be chosen from the list mentioned below or from any other university programme.

MASTER DISSERTATION	**30**

ELECTIVE COURSES

Sustainable nematode management tropical agro-ecosystems	3
Quantitative plant Nematology	3
Management of plant-parasitic nematodes	4
Temperate nematology	4
Data and information management	4
International environmental protection of oceans and seas	4
Ecological modelling	4
Aquatic toxicology and environmental risk assessment	4
Entomopathogenic nematodes: biotechnology and use in biological control	3
Environmental Ecology	10
Soil pollution and soil protection	9
Scientific communication in English	5

European Master of Science in Nematology

MAJORS: NEMATOLOGY APPLIED TO AGRO-ECOSYSTEMS • NEMATOLOGY APPLIED TO NATURAL ECOSYSTEMS
Erasmus Mundus Master Programme jointly offered by Ghent University and partners

Course content

Nematodes are everywhere. They are among the most harmful organisms of crops, especially in the tropics, but on the other hand they are very promising as natural antagonists that can be used in bio-control programmes against pest insects. Because of their ubiquitous presence, overwhelming densities and diversity (sometimes compared to insects) the free-living nematodes are an ideal tool for biodiversity studies. They are used as bio-indicators of pollution in both terrestrial and aquatic environments.
The aim of the course is to train students to become highly qualified nematologists with multidisciplinary knowledge in the diverse fields of Nematology through mobility to different Universities within Europe (Bielefeld, Germany; Evora, Portugal; Ghent, Belgium; Jaén, Spain; Kiel, Germany; Leuven, Belgium; Wageningen, The Netherlands and the Scottish Crop Research Institute, UK) and with a well-integrated language and cultural experience.
The programme deals with fundamental as well as applied aspects of Nematology and concerns different groups of nematodes in all possible environments: natural soils, agricultural soils, aquatic sediments of freshwater, brackish or marine habitats, temperate and tropical regions.

> Master dissertation

In the fourth semester students will undertake a research project as a master thesis at any of the participating institutes (30 credits). The master dissertation is a requirement for every candidate to obtain a masters' degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review, a scientific research often including experiments, analysis and discussion of the results, conclusion, summary and reference list.

Course structure

First semester (25 credits)
The first semester consists of seven compulsory basic courses providing essential theoretical and practical information as well as a more in-depth and broader multi-disciplinary knowledge of Nematology.

Second semester (35 credits)
Choice between two majors:
– Nematology applied to agro-ecosystems
– Nematology applied to natural ecosystems
Elective courses are taken according to the chosen major.

Summer course (5 credits)
The summer course Networking and Seminars provides the students with a more advanced knowledge on current research in a broad range of Nematology fields and brings them into direct contact with prominent international experts in Nematology.

Third semester (25 credits)
Elective courses according to the chosen major.

Fourth semester (30 credits)
In the fourth semester students will undertake a research project as a master thesis at any of the participating institutes.

Career perspectives

Based upon its multidisciplinary approach, the EUMAINE-programme prepares the student for a career in diverse environments in the fields of Biology, Bio- and Agro-engineering. They have the excellent background and capacities to fulfil functions in education, fundamental and applied research and governmental institutions at the international job market.

Programme mobility

The main difference and advantage of this Erasmus Mundus programme versus the Master of Nematology at Ghent University is the mobility and the co-operation between different leading universities. Students are required to spend at least one semester at a partner University other than Ghent University (partners: Bielefeld, Germany; Èvora, Portugal; Ghent, Belgium; Jaén, Spain; Kiel, Germany; Leuven, Belgium; Wageningen, The Netherlands and the Scottish Crop Research Institute, UK).

Contact

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European Master of Science in Nematology

120 ECTS CREDITS • FULL-TIME OR PART-TIME • LANGUAGE: ENGLISH • DEGREE: JOINT MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

EUMAINE is open to top–level students with a University Bachelor degree (requiring a minimum of 3 year study) in Agricultural sciences, Biology, Bioscience engineering or Environmental sciences.
Applicants with another degree but with experience or knowledge in one of these fields may be admitted to the course at the discretion of the EUMAINE Education Board on the basis of academic transcripts, CV and motivation. Proficiency of English is required.
For Flemish degrees:
The exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE
At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:
– a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
– an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
– a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
– certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.
The following students are exempted from the language requirement:
– holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
– students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
– students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

> Specific language requirements:
interest in the languages of the partner universities is recommended.

PRACTICAL INFORMATION

APPLICATION DEADLINE
– Non-EU-students applying for an Erasmus Mundus grant (according to the definitions of Erasmus Mundus): January 15
– Other students: "self sponsored" non-EU-students: January 15; EU-students: June 1
www.eumaine.UGent.be

ENROLLING INSTITUTION
Ghent University

TUITION FEE
– € 7,000 (annually) for non-EU students and
– € 3,000 (annually) for EU-students

SCHOLARSHIPS
– Erasmus Mundus grants for non-European students
– Erasmus student grants for European students

START/END OF THE PROGRAMME
Two year programme.
Start academic year: last week of September.

Master of Biochemistry and Biotechnology

MAJORS/MINORS: BIO-INFORMATICS AND SYSTEM BIOLOGY • BIOCHEMISTRY AND STRUCTURAL BIOLOGY • BIOMEDICAL BIOTECHNOLOGY • MICROBIAL BIOTECHNOLOGY • PLANT BIOTECHNOLOGY
MINORS: ECONOMICS AND BUSINESS ADMINISTRATION • EDUCATION - INTERDISCIPLINARY COMBINATION • RESEARCH

Courses in English and Dutch. Possibility to choose a complete curriculum of English courses.

Course content

The training in biochemistry and biotechnology has the aim of forming scientists who not only have a thorough knowledge of biochemistry, molecular biology, genetics, cell biology and physiology but who can also use the biochemical and biotechnological techniques in a creative and inventive manner on plants, animals or humans. The students are also initiated in the interesting world of bioinformatics.
The training in biochemistry and biotechnology also has a social aim: to apply research and knowledge in favor of humanity and society. The focus within the training reflects this social involvement in research on the origin and treatment of all kinds of illnesses (such as cancer, chronic inflammation and metabolic diseases), on the improvement of plants (sustainable food production, production of food with improved nutritional quality, production of bio-fuels) and on the use of micro-organisms in certain chemical processes (detoxification of contaminants). Knowledge and research results are continuously implemented in the programme courses. This close interaction between education and research in the biochemistry and biotechnology programme is based on a strong and world-famous research tradition in biochemistry, molecular biology and genetics of the 3 departments involved in the education program. This ultimately leads to an interesting master dissertation and creates ample possibilities for doctoral research in an international research environment under the guidance of excellent researchers.

Course structure

The master programme of biochemistry and biotechnology has a mixed offer of courses in English and Dutch. It is possible to choose a complete curriculum of English courses (120 credits).
The 2-year master programme is built on 4 modules of 30 study points (ECTS credits) each:
- common general courses (30 ECTS, general, broadening);
- major course package (30 ECTS, specializing);
- minor course package (30 ECTS, broadening);
- master dissertation (30 ECTS, practical training).

The master programme offers five specializing majors:
- **biochemistry and structural biology** focuses on the determination of protein structures and the study of the functioning of molecular `machines';
- **bio-computing and system biology** has been based on the recent need for bio-computing and computational biology for the processing of the vast amount of data generated from the biological information flow on different levels (genome, transcriptome, proteome, interactome, signalosome).;
- **biomedical biotechnology** studies the relation between basic cell biological processes and pathological processes (inflammation, cancer, metabolic illnesses) and pays also attention to biomedical applications such as the development of new vaccines and new therapies;
- **microbial biotechnology** studies microbial diversity and functionality and applies the fundamental knowledge of the molecular genetics of micro organisms such as bacteria, yeast, moulds and viruses in a broad variety of biotechnological applications.
- **plant biotechnology** aims at the development of biotechnological applications of plants in agriculture (e.g. disease resistance or drought tolerance), production of bio fuels and the biosynthesis of products with medical applications.

The major is supported by a training period (6 ECTS) in the first master and a master test (30 ECTS) in the second semester of the second master.
The master programme offers four broadening minors.
The minor **Research** in particular is interesting for English speaking students.
- The minor **Research** offers the students an extra speciality, chosen from the remaining majors and includes an extra training period.
- The minor **Education** offers a part of the secondary teacher training.
- The minor **Economy and Business Administration** offers an introduction to different aspects of business life .
- The minor **Interdisciplinary combination** permits to combine a major with a coherent package of courses from a different field (informatics, chemistry, engineer sciences,...).

Career perspectives

A very large number of the current graduates in biochemistry and biotechnology (between 40-60 % in the past 5 years), start doctoral studies and mostly graduate successfully. Ghent University has a very strong research tradition in the domain of biochemistry and biotechnology, which leads to highly qualified PhDs in an internationally competitive research environment. Later, these doctors find their way to national and international universities, research institutions and a growing number of young biotechnological companies.
The use of biochemical and biotechnological methods and production strategies increases in health care, the environmental sector, food industry, the agricultural industry, the chemical industry. This implies that there is and will be a demand for academically educated, but also practically trained biochemists and biotechnologists. Given the broad scientific basic education, the combination of chemistry and biology, the practical and research-oriented aspects of the study program, the biochemist and the biotechnologist are well trained for the jobmarket.
The employment sectors are scientific research at universities, research centers, R&D in companies, the pharmaceutical industry, cosmetics companies, laboratories for medical analysis, the food industry, fermentation industry, agricultural industry, petrochemical industry, chemical industry, biotechnological companies, companies in environmental technology, public services for water treatment, the environmental sector.
Finally, graduates in biochemistry and biotechnology often end up in education, both at the level of the secondary schools (for masters) and at the level of the colleges of higher education (for doctors).

> Master dissertation

In the second year, a research project (master dissertation) of 30 ECTS is scheduled. The master dissertation is a requirement for every student to obtain a masters' degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review part, practical research and an original analysis of the topic.

Master of Biochemistry and Biotechnology

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: DUTCH/ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

For non-Flemish degrees:
The course is open to students with at least a Bachelor degree in the field of biochemistry and biotechnology with minimum 180 credits.
For Flemish degrees:
The exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE
At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:
- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
- a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
- certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.

The following students are exempted from the language requirement:
- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE
General deadlines:
- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION
Ghent University

TUITION FEE
- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS
- offered by Ghent University for master studies: a limited number of grants awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)
- see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME
Two year programme
Start academic year: middle of September

Master of Biochemistry and Biotechnology

MASTER (YEAR 1)

GENERAL COURSES	**18**
Structure and Function of Biological Macromolecules	6
Bio-informatics 2	3
Science Communication	3
Biostatistics	3
Biotechnology and Society	3
CLUSTERS	**15**
One Major from	(21)
MAJOR/MINOR BIO-INFORMATICS AND SYSTEM BIOLOGY (BIS)	
Programming for Bio-informatics	6
Comparative Genome Analysis	3
Structural Bio-informatics	3
Algorithms and Data Structures	3
Project	6
MAJOR/MINOR BIOCHEMISTRY AND STRUCTURAL BIOLOGY (BSB)	
Experimental Biochemistry	3
Biocatalysis	3
Protein Engineering and Molecular Design	3
Experimental Structural Biology	6
Project	6
MAJOR/MINOR BIOMEDICAL BIOTECHNOLOGY (BIB)	
Molecular Pathophysiology and Experimental Therapy	6
Transgenetics of Animal Model Organisms	6
Experimental Molecular Cell Biology	3
Project	6
MAJOR/MINOR MICROBIAL BIOTECHNOLOGY (MIB)	
Food Microbiology and Safety	3
Plant-Microbe Interactions	3
Host-Virus Interactions	3
Microbial Genomics	3
Molecular Microbial Ecology	3
Project	6
MAJOR/MINOR PLANT BIOTECHNOLOGY (PLB)	
Signal Transduction and Communication in Plants	3
Plant-Microbe Interactions	3
Plant Cell Biology	3
Developmental Biology of Plants	3
Molecular Breeding and Biodiversity of Plants	3
Project	6
One minor of 30 credits	(21)
MINOR ECONOMICS AND BUSINESS ADMINISTRATION	
MINOR EDUCATION	
MINOR INTERDISCIPLINARY COMBINATION	
group of individually selected courses from study programmes Chemistry, Biology, Informatics, Farmaceutical Sc., Biomedical Sc., Bio-engineering and Engineering	
MINOR RESEARCH	
min. 21 credits from one other major/minor AND remaining 9 credits from master's programmes Flemish Community or from the list Elective Courses	

MASTER (YEAR 2)

GENERAL COURSES	**12**
Systems Biology	6
Biotechnology: Biosafety, GMP and Intellectual Property	3
Bioethics and Society	3
CLUSTERS	**18**
One Major (students Minor EB, Education, Interdisc. Comb.: major linked to chosen major/minor; students Minor Research: major linked to one of major/minor	(9)
MAJOR BIO-INFORMATICS AND SYSTEM BIOLOGY (BIS)	
Computational Biology and Modelling of Biological Systems	3
Data Mining	3
Data Libraries	3
MAJOR BIOCHEMISTRY AND STRUCTURAL BIOLOGY (BSB)	
Biomembranes	3
Metabolic Engineering	3
Glycobiology	3
MAJOR BIOMEDICAL BIOTECHNOLOGY (BIB)	
Human Genetics and Genetic Diseases	3
Molecular Cancer Biology	3
Neurobiology	3
MAJOR MICROBIAL BIOTECHNOLOGY (MIB)	
Metabolic Engineering	3
Bacterial Biotechnology	3
Fungal Biotechnology	3
MAJOR PLANT BIOTECHNOLOGY (PLB)	
Experimental Plant Biotechnology	6
Applied Plant Biotechnology	3
One minor of 30 credits	(9)
MINOR ECONOMICS AND BUSINESS ADMINISTRATION	
MINOR EDUCATION	
MINOR INTERDISCIPLINARY COMBINATION	
group of individually selected courses from study programmes Chemistry, Biology, Informatics, Farmaceutical Sc., Biomedical Sc., Bio-engineering and Engineering	
MINOR RESEARCH	
min. 21 credits from one other major/minor AND remaining 9 credits from master's programmes Flemish Community or from the list Elective Courses	
MASTER DISSERTATION	**30**

Master of Biochemistry and Biotechnology

ELECTIVE COURSES

Advanced Programming in Bio-informatics	3
Molecular and Experimental Immunology	3
Biotechnological Techniques in Medical Diagnostics	3
Biopharmacy	3
Cellular Stress, Cell Death and Senescence	3
Molecular Endocrinology	3
Bionanotechnology	3
Molecular Phylogeny	3
Unix System for Bio-informatics Environment	3
The Eukaryotic Cell Cycle	3
Epigenetics	3
Phytopathology	3
Metabolomics	3
Molecular Simulations of Biosystems	3
Host-Parasite Interactions	3
Developmental and Differentiation Processes in Micro-organisms	3
Biotechnology - Complying with International and National Regulations	3

Contact

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International Relations Officer
Valérie Ingelrelst
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T +32 (0)9 264 50 43

Master of Biology

MAJORS: ECOLOGY • EVOLUTION • BIODIVERSITY • FUNCTIONAL BIOLOGY
MINORS: RESEARCH • EDUCATION • ECONOMICS AND BUSINESS ADMINISTRATION

Courses in English and Dutch. Possibility to choose a complete curriculum of English courses.

Course content

As the study of life, the MSc in Biology has a far-reaching influence in numerous areas within science and society. The research domain of biology itself is very broad, and covers the complete spectrum of the diversity of the formation of life and the different organisation levels of life, ranging from a cell to the eco-system and biosphere level.
Actual topics and challenges such as protection of endangered species, global change, sustainability, cloning of organisms, dangerous diseases and medical progress find their roots in biology. Biology also forms a source for numerous conceptual innovations that lead towards new disciplines such as the molecular biology and biotechnology.
Thanks to close interaction with this and other scientific disciplines such as chemistry, geology, geography and physics, biology forms an exciting study domain that is constantly in evolution and of which the development goes hand in hand with broad developments and challenges within society.

Course structure

The master programme of biology has a mixed offer of courses in English and Dutch. It is possible to choose a complete curriculum of English courses (120 credits).
The curriculum of a 2 year master programme in biology is divided in to the following parts:
– 20 credits for four general courses;
– 30 credits for the master dissertation;
– 40 credits for major courses;
– 30 credits for minor (elective) courses.

The general courses prepare you for the correct choice of your major courses and your master dissertation.
In the first year of the master programme you select two packages of major courses from a total of four major course packages.
The four major course packages are: Ecology, Evolution, Functional biology and Biodiversity. These major course packages give you a chance to improve your in-depth knowledge in all of the existing research areas of which there is a research expertise within Ghent University, and they allow you to specialize within two of these research areas.

The master dissertation is situated within the research area of at least one of the two major course packages you have chosen.
Most of the master dissertations fit within a current national or international (research) project. However, your master dissertation can also exploit the results of projects or a master dissertation can even be of a prospective character towards future new projects.
Besides your two major course packages, you can also choose from three minor course packages. Here you choose 30 credits of broadening elective courses, offered within the same master programme of Biology or offered by another Flemish/Dutch University.

Career perspectives

As a graduate of the master of Biology you can work on scientific research in universities or scientific research institutions, at secondary or higher education level, in counseling or managerial functions with the government and in companies where research and development is the core business.

> Master dissertation

In the second year, a research project (master dissertation) of 30 ECTS is scheduled. The master dissertation is a requirement for every student to obtain a masters' degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review part, practical research and an original analysis of the topic.

Contact

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Master of Biology

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: DUTCH/ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

For non-Flemish degrees:
The course is open to students with at least a Bachelor degree in the field of chemistry with minimum 180 credits.
For Flemish degrees:
The exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE
At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:
– a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
– an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
– a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
– certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).
Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.

The following students are exempted from the language requirement:
– holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
– students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
– students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE
General deadlines:
– for students who need a visa: 1st of March
– for students who do not need a visa: 1st of June

ENROLLING INSTITUTION
Ghent University

TUITION FEE
– standard tuition fee for full-time programme (60 ECTS credits): € 567,80
– reduced tuition fee for students from developing countries: € 80
(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS
– offered by Ghent University for master studies: a limited number of grants awarded on a competitive basis
– Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)
– see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME
Two year programme
Start academic year: middle of September

Master of Biology

MASTER (YEAR 1)	
GENERAL COURSES	**15**
Genetics and Molecular Techniques II	5
Advanced Applied Statistics	5
Scientific Communication and Reports I	5
CLUSTERS	**45**
Two majors (each 20 credits) from	(40)
MAJOR ECOLOGY	
one course marked reference *	
Applied Ecology	5
Microbial Ecology	5
Paleoecology and Global Change	5
Plant Ecology	* 5
Limnology	*5
Marine Ecology	* 5
MAJOR EVOLUTION	
Genome Biology and Bioinformatics	5
Evolutionary Processes of Heritable Variation	5
Evolutionary Study of Behaviour	5
Evolutionary Developmental Biology	5
Evolutionary Morphology	5
MAJOR BIODIVERSITY	
one course marked reference *	
Phylogeny and Molecular Evolution	5
Practical Taxonomy: Principles and Techniques	5
Applied Biodiversity Science: Policy, Management and Conservation	5
Diversity and Evolution of Protoctista	*5
Spore Plants: bryology and pteridology	*5
Functional Evolution of Invertebrates	*5
Mycology: Basidiomycota	*5
Spermatophytes, Phylogeny and Taxonomy	*5
Ornithology	*5
Prokaryotic Diversity	*5
MAJOR FUNCTIONAL BIOLOGY	
Signalling in Plants	5
Functional Microbiology: Adaptations of Micro-organisms to the Environment	5
Biology of Ageing	5
Physiological Regulation in Animals	5
One minor of 30 credits spread over Ma1 and Ma2	(5)
MINOR RESEARCH	
courses from Minor Research OR Major Courses OR Elective Course Ba3 Biology OR from other study programmes of universities of Flemish Community	
MINOR EDUCATION	
MINOR ECONOMICS AND BUSINESS ADMINISTRATION	

MASTER (YEAR 2)	
GENERAL COURSES	**5**
Scientific Communication and Reports II	5
CLUSTERS	**25**
One minor of 30 credits spread over Ma1 and Ma2	
MINOR RESEARCH	
(courses from Minor Research OR Major Courses OR Elective Course Ba3 Biology OR from other study programmes of universities of Flemish Community)	
MINOR EDUCATION	
MINOR ECONOMICS AND BUSINESS ADMINISTRATION	
MASTER DISSERTATION	**30**
MINOR RESEARCH	
Ethology	5
Evolution of Primates and Paleo-anthropology	5
Immunology and Pathology	5
Insect Physiology	5
In-vivo Bio-imaging	5
Molecular Plant Physiology	5
Multivariate Data Analysis	5
Paleobiology of Micro-organisms	5
Paleontology 2	5
Parasitology	5
Sociobiology	5
Structural Morphology of Spermatophytes	5
Teledetection: Image Registration and Processing	5
Applied Microbiology	5
Comparative Physiology	5
GIS	5
Biological Excursions in the Human Brain	5
Professional Internship	5
International Course	5

Master of Chemistry

MINORS: INDUSTRY AND MANAGEMENT • RESEARCH AND DEVELOPMENT • EDUCATION

Courses in English and Dutch. Possibility to choose a complete curriculum of English courses.

Course content

We owe a great part of our life quality to the development of exact sciences, these of chemistry in particular. Its influence can be found in numerous different branches, such as medicine, biology, agriculture, etc.
The chemical impact is also omnipresent in the industrial world: almost every branch has to deal with chemistry at some level, and this as well as in the production process and quality control as in product improvement, waste processing …
It can be assumed that chemistry will continue to play an essential role in future developments of society. Indeed, innovation and the development of new products and processes with an added value are simply impossible without a fundamental knowledge of sciences, the structure of molecules and insight into molecular processes and reactions.
Chemistry, with its characteristic strength in analysis and synthesis of molecules and molecular processes is hence indispensable within this frame. The development of long-lasting production-processes, new high-tech materials, products in nutrition - and pharmaceutical industries and methods for controlling diseases, … none of these can be seen separately from the evolution in chemistry.

Course structure

The master programme of chemistry has a mixed offer of courses in English and Dutch. It is possible to choose a complete curriculum of English courses (120 credits).
During the master in chemistry you can orientate yourself in a particular direction by means of choosing a so-called minor.
Every minor is a reflection of a specific career branch (education, research and development, industry and management). The programme has been arranged in such a way that, regardless of the minor you choose, an equivalent master degree is obtained.
The minor in research and development is particularly interesting for English speaking students.

The master programme itself consists of 4 modules of 30 credits.
A first module consists of 6 compulsory general courses. These courses are, on the one hand, general chemistry courses on an advanced level or, on the other hand, general courses that are considered as essential for a master in chemistry.
The second module contains 25 credits of advanced chemistry courses, related with the research performed in the different research groups in the chemistry departments. Together, they give a clear in-depth knowledge in a broad area of chemistry. The other 5 credits are linked to an elective course, related to the master dissertation.
All the advanced chemistry courses of the second module are scheduled in the first master year. As they cover a broad area of chemistry, a well-considered choice can be made for the master dissertation, which is foreseen in the second year of the program.
In the second year, a research project (master dissertation) of 30 ECTS is scheduled. The master dissertation is a requirement for every student to obtain a masters' degree. The master dissertation is an original piece of research work, performed in one of the research groups of Ghent University under the guidance of a promoter or supervisor and aims to develop and strengthen the research capacity skills of the students. It consists of a literature review part, practical research and an original analysis of the topic. Students have the possibility to do a part of their master dissertation abroad.
The remaining 30 credits are completed over the two master years with broadening elective courses.

Career perspectives

It is a fact that chemistry is involved in several industrial branches, important for the economy and employment, such as chemical industry, pharmaceutical industry, agriculture … Due to the broadness of the scientific program, master graduates in chemistry are fit to apply for jobs in different sectors of industry and their possibilities on the job market are very diverse.
Masters in chemistry can for instance be involved in scientific research, product development, quality control … or they can take managerial functions for their account, and this in companies as well as in government institutions. Besides that, they are also well prepared for a career in the services branch (including education).
The most important assets of university graduated chemists are that they are research minded, oriented towards solving problems and that they are polyvalent.

> Master dissertation

In the second year, a research project (master dissertation) of 30 ECTS is scheduled. The master dissertation is a requirement for every student to obtain a masters' degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review part, practical research and an original analysis of the topic.

Contact

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Master of Chemistry

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: DUTCH/ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

For non-Flemish degrees:
The course is open to students with at least a Bachelor degree in the field of chemistry with minimum 180 credits.
For Flemish degrees:
The exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE

At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:
- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
- a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
- certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.

The following students are exempted from the language requirement:
- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE

General deadlines:
- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION

Ghent University

TUITION FEE

- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS

- offered by Ghent University for master studies: a limited number of grants awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)
- see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME

Two year programme
Start academic year: middle of September

Master of Chemistry

MASTER (YEAR 1)

GENERAL COURSES 20
Molecular Physical Chemistry 5
Chemometrics 5
Electrochemistry 5
Polymer materials 5

CLUSTERS 15
One Minor to a total amount of 30 credits spread over Ma1 and Ma2
MINOR INDUSTRY AND MANAGEMENT
Basic Courses + 13 credits to be chosen from Elective Courses
MINOR RESEARCH AND DEVELOPMENT
Advanced Courses + Minor Courses
MINOR EDUCATION

ELECTIVE COURSES 25
Courses to be chosen from the Minor Research and Development – Advanced Courses.

MASTER (YEAR 2)

GENERAL COURSES 10
Industrial chemistry 5
Chemical Biology 5

CLUSTERS 15
One Minor to a total amount of 30 credits spread over Ma1 and Ma2
MINOR INDUSTRY AND MANAGEMENT
Basic Courses + 13 credits to be chosen from Elective Courses
MINOR RESEARCH AND DEVELOPMENT
Advanced Courses + Minor Courses
MINOR EDUCATION

ELECTIVE COURSES 5
Courses to be chosen from the Minor Research and Development – Advanced Courses.

MASTER DISSERTATION 30

MINOR INDUSTRY AND MANAGEMENT

Basic Courses
Economics 6
Financial and Cost Price Reporting in Companies 6
Business Administration 5
Elective Courses
Introduction to Entrepreneurship 4
Innovation and Technology Management 4
Project Management 4
Business Skills 4
Scientific Communication in English 5
Sustainable Energy and Rational Use of Energy 4
Rational Use of Materials 5
Environmental Law 4
Marketing management 6
Internship 6

MINOR RESEARCH AND DEVELOPMENT

Advanced Courses
Organometallics and Catalysis 5
Trends in Organic Chemistry 5
Molecular Modelling 5
Solid State Chemistry 5
Mass Spectrometric Isotopic Analysis and Chemical Surface Analysis 5
Advanced Spectroscopic Methods of Analysis 5
Minor Courses
Advanced NMR Spectroscopy: Application to Structure Analysis 5
Advanced NMR Spectroscopy: Theory and Applications 3
Asymmetric Synthesis 3
Bio-organic Chemistry 3
Polymers for Bio-related Applications 3
Physical and Chemical Investigation of Environmental Pollution 3
Advanced X-ray Spectroscopic Techniques for Chemical Analysis 3
Advanced Chromatography 3
Chemistry of the Global Atmosphere 3
Quantum Chemical Methods 3
Polymer Processing 3
Chemistry of Nanostructures 3
Synthesis Strategy 3
Nanoporous Materials 3
Advanced Polymer Chemistry 3
Raman Spectroscopy and Molecular Spectroscopic Imaging Techniques 3
Homogeneous Catalysis: Recent Developments 3
d- and F-block Coordination Chemistry 3
Advanced Electrochemistry 3
Superconducting Materials 3
Heterogenous Catalysis 5

Master of Marine and Lacustrine Sciences

MAJORS: BIOSCIENCES • EARTH SCIENCES
MINORS: RESEARCH • EDUCATION • ECONOMICS AND BUSINESS ADMINISTRATION

Courses in English and Dutch. Possibility to choose a complete curriculum of English courses.

Course content

The Master of Science programme in Marine and Lacustrine sciences originates from a collaboration between several marine and lacustrine research groups respectively in biology, micro-biology, geology, applied biological science, civil engineering and law at Ghent University.
Collaboration in the field of research between several of these research groups has evoked the need for a multidisciplinary educational approach of different marine and lacustrine systems in order to train students to get a more integrated fundamental and applied knowledge of the marine and lacustrine environment in all its aspects (biological, geological, chemical). In addition knowledge of the exploitation of the sea and deep lakes, in terms of engineering, biological resources and the present policies are essential in order to get an integrated view of the relationship between system functioning and socio-economical activities.
Within this masters course collaboration takes place with experts from other renowned institutes and research groups outside Ghent University mainly in the field of chemistry, biogeochemistry, physical oceanography, modeling and fishery.

Course structure

The master programme of marine and lacustrine sciences has a mixed offer of courses in English and Dutch. It is possible to choose a complete curriculum of English courses (120 credits).
The master programme consists out of 4 blocks:

- a mutual package of general broadening courses including one elective course depending on the background of the student (40 + 5 credits);
- a major course package in earth- or biosciences (15 credits);
- a minor course package in Research, Education or Economy;
- master dissertation (30 credits).

The minor in Research in particular is interesting for English speaking students. (30 credits).
The mutual general courses contribute to the multidisciplinary character of the programme. These courses give basic knowledge about the marine and lacustrine environment and their management.

The major course package consists of the master dissertation on one side and two clusters on the other side: bio-sciences and earth sciences.
One can choose from these clusters, in accordance with their preference for a rather biological/ecological or geological orientation. Fieldwork on the ocean, deep lakes or shores is an important part in both major course packages. It is also possible to follow a part of the master programme abroad via an international exchange programme.

The minor course packages allow a professional orientation within the program. In this package 30 credits can be chosen from the teacher training courses or one can choose for a company- and economically orientated programme. The minor orientated towards Research covers a more practical, research - and policy supporting course package such as ecological modeling, GIS, teledetection, statistics and molecular techniques … Also a short-term stage (3 - 4 weeks) where you can work in a professional environment is included in this minor. The minor in Research in particular is interesting for English speaking students.

Career perspectives

This multidisciplinary programme will lead towards a more efficient integration on the labour market, in which broadly educated scientists are attracted for positions that require an integrated approach.
The integration of knowledge in different disciplines is very valuable in every professional position in which you have to deal with marine and lacustrine environments in one way or another, independent of the geographical region.
Furthermore a graduate in this master programme is orientated in such a way that a broad spectrum of scientific positions can be fulfilled. A graduate in marine and lacustrine sciences is a scientist that has the background and the capacity to anticipate in various current disciplines in education, fundamental and applied research and policy supporting tasks.

> Master dissertation

In the second year, a research project (master dissertation) of 30 ECTS is scheduled. The master dissertation is a requirement for every student to obtain a masters' degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review part, practical research and an original analysis of the topic.

Contact

Ghent University – Faculty of Sciences
International Relations Officer
Valérie Ingelrelst
K.L. Ledeganckstraat 35, B-9000 Gent
T +32 (0)9 264 50 43

Master of Marine and Lacustrine Sciences

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: DUTCH/ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

For non-Flemish degrees:
Students enrolling in the course should have already a Bachelor degree in biology, biochemistry, biotechnology, chemistry, geology, geography or bio-engineering.
Students with a bachelor degree in the following topics should take extra preparation courses for 15 to 90 credits: engineering sciences, physics and astronomy, informatics, mathematics, veterinary, biomedical sciences, industrial sciences, nautical sciences. Take contact in order to be sure about your eligibility.
For Flemish degrees:
The exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE
At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:

- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
- a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
- certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.

The following students are exempted from the language requirement:

- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE
General deadlines:

- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION
Ghent University

TUITION FEE

- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS

- offered by Ghent University for master studies: a limited number of grants awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)
- see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME
Two year programme
Start academic year: middle of September

Master of Marine and Lacustrine Sciences

MASTER (YEAR 1)	
GENERAL COURSES	**40**
Biogeochemical Cycles	4
Oceanography	6
Limnology	5
Paleoclimatology	4
Tools in Aquatic Sciences	4
International Environmental Protection of Oceans and Seas	4
Law and Ethics on Nature Conservation	4
Data and Information Management	4
Field Course	5
CLUSTERS	**15**
One major	
MAJOR BIOSCIENCES	
Biodiversity of Marine and Lacustrine Micro-organisms	6
Biodiversity of Aquatic Food Webs: from algae to marine mammals	6
Aquaculture	3
Fisheries	3
Ecotoxicology and Risk Analysis	3
Evolution and Biogeography of Aquatic Organisms	6
MAJOR EARTH SCIENCES	
Genesis and Evolution of Sedimentary Basins	4
Paleobiology of Micro-organisms	5
Diagenesis and Low-grade Metamorphism	6
ELECTIVE COURSES	**5**
One course (depending on previous studies or chosen major)	
Marine and Lacustrine Biology	5
Marine and Lacustrine Geology	5

MASTER (YEAR 2)	
CLUSTERS	**30**
MINOR RESEARCH	
(mandatory course marked reference A and 25 credits marked reference B or credits from the master courses of Ghent University)	
Professional Work Placement	5
Integrated Coastal Zone Management	5
Margin Systems and Extreme Environments	5
Lacustrine Systems	5
Teledetection: Image Registration and Processing	5
GIS	5
Advanced Applied Statistics	5
Ecological Modelling	4
Environmental Impact Assessments	3
Molecular Techniques and their Application in Evolutionary and Ecological Studies	3
MINOR EDUCATION	
MINOR ECONOMICS AND BUSINESS ADMINISTRATION	
MASTER DISSERTATION	**30**

Master of Geology

MAJORS: BASIN DYNAMICS: FROM LITHOSPHERIC PROCESSES TO BIOSPHERE EVOLUTION • SOIL AND GROUNDWATER
MINORS: RESEARCH AND ENTERPRISE • EDUCATION • ECONOMICS AND BUSINESS ADMINISTRATION

Courses in English and Dutch. Possibility to choose a complete curriculum of English courses.

Course content

The global and sustainable management and conservation of water and soil, mineral resources and energy stands worldwide very high on the agenda. To manage these important resources, a fundamental knowledge of our planet Earth is required.
For a geologist "global change" is a familiar topic, with a variety of facets. Our planet is an incredibly dynamic system and unraveling it is one of the biggest challenges of the 21st century. Ghent University offers a master programme, with the opportunity to specialize in one of the following topics: soil and groundwater or basin dynamics: from lithospheric processes to biosphere evolution. Both topics address a key element in the system of our planet.
The first topic brings forward the characterization and protection of two essential ingredients of life on our planet: soil and groundwater.
The second topic encompasses the origin and evolution of large oceanic and continental sedimentary basins, and the role they play in the composition, structure and dynamics of the lithosphere, the climate and the biosphere.
A very important facet within these studies is cooperation in development.

Course structure

The master programme of geology has a mixed offer of courses in English and Dutch. It is possible to choose a complete curriculum of English courses (120 credits).
The backbone in the study of these two topics (soil and groundwater/ basin dynamics) is a major course package in combination with a master dissertation for 30 credits. The project that will lead towards the master dissertation can be started in the first master year.

The major course package in soil and groundwater offers two different modules. Both deal with the integrated management of the identified compartments (soil and groundwater).
The integrated approach forms an asset for this study. Environmental impact assessment for instance links the two compartments as an entity. It underpins the forecasting and evaluation of the impact of man on the environment.

The major course package in basin dynamics is also divided in two modules. The first module focuses on sedimentary processes, the dynamics of oceans and climates and the evolution of the biosphere, with micropaleontology in a key role. In the second module petrological and geophysical aspects are addressed. Both modules include field work.

Beside the major course package (60 credits), there is also a minor course package for 30 credits. This minor course package consists of elective courses that help the student to get prepared for fundamental research, in the framework of a doctoral study, or straitghtforwardly for Industry. These minor course packages address three areas: research and enterprise, education and economy and management. The minor Research and Enterprise in particular is interesting for English speaking students. It is also possible to opt for a stay abroad within the space offered by the minor course package.

Career perspectives

The strong multidisciplinary foundation of this master programme does not only open doors towards innovative research, but also towards dynamical industrial sectors, governmental agencies , NGO's, etc. A student in the master programme of Geology also acquires step by step an enormous advantage: the skill to express him/herself fluently in professional English. The world will be his/her work area.

> Master dissertation

In the second year, a research project (master dissertation) of 30 ECTS is scheduled. The master dissertation is a requirement for every student to obtain a masters' degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review part, practical research and an original analysis of the topic.

Contact

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International Relations Officer
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Master of Geology

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: DUTCH/ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

For non-Flemish degrees:
The course is open to students with at least a Bachelor degree in the field of geoloy with minimum 180 credits.
For Flemish degrees:
The exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE

At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:
- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
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Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.

The following students are exempted from the language requirement:
- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
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PRACTICAL INFORMATION

APPLICATION DEADLINE

General deadlines:
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ENROLLING INSTITUTION

Ghent University

TUITION FEE

- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS

- offered by Ghent University for master studies: a limited number of grants awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)
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START/END OF THE PROGRAMME

Two year programme
Start academic year: middle of September

Master of Geology

MASTER (YEAR 1)

CLUSTERS **54**
One Major from (24)

MAJOR BASIN DYNAMICS:
from Lithospheric Processes to Biosphere Evolution

Micropaleontology and Paleo-environment Reconstruction	6
Field Course Biosphere Evolution and Stratigraphy	6
Paleoclimatology*	6
Diagenesis and Low-grade Metamorphism*	6
Petrology of Magmatic and High-grade Metamorphic Rocks**	6
Geofluids**	3
Exploration Geophysics**	6
Genesis and Evolution of Sedimentary Basins**	3

MAJOR SOIL AND GROUNDWATER

Analysis and Dynamics of Clays*	6
Groundwater Modelling*	6
Groundwater Chemistry*	6
Geophysical Well Logging*	6
Environmental Soil Evaluation**	6
Hydrogeological Parameter Identification**	6
Environmental Impact Assessment**	6
Geographic Informationsystems**	6

One minor (30)

MINOR RESEARCH AND ENTERPRISE

30 credits to be chosen from:
1) the Elective Course List Master of Geology, Minor Education, Minor Economics and business or the master's programmes of the Flemish Community OR
2) 24 credits from the Elective Course List Master of Geology or the master's programmes of the Flemish Community + 6 credits Master dissertation Part 1

MINOR EDUCATION
MINOR ECONOMICS AND BUSINESS ADMINISTRATION

ELECTIVE COURSES **6**
Courses from the Elective Course List, Minor Education, Minor

* taught in 2009-2010
** taught in 2010-2011

MASTER (YEAR 2)

CLUSTERS **21**

MAJOR BASIN DYNAMICS:
from Lithospheric Processes to Biosphere Evolution

Field Course Magmatic and Metamorphic Systems	6
Paleoclimatology*	6
Diagenesis and Low-grade Metamorphism*	6
Petrology of Magmatic and High-grade Metamorphic Rocks**	6
Geofluids**	3
Exploration Geophysics **	6
Genesis and Evolution of Sedimentary Basins*	3

MAJOR SOIL AND GROUNDWATER

Analysis and Dynamics of Clays*	6
Groundwater Modelling*	6
Groundwater Chemistry*	6
Geophysical Well Logging*	6
Environmental Soil Evaluation**	6
Hydrogeological Parameter Identification**	6
Environmental Impact Assessment**	6
Geographic Informationsystems**	6

ELECTIVE COURSES **2/3**
Courses for 9 credits (in combination with the Major Basin Dynamics) or 6 credits (in combination with the Major Soil and Groundwater) from the Elective Course List, Minor Education, Minor Economics or the Master's Programmes of the Flemish Community

MASTER DISSERTATION **4/5**
(extra course of 6 credits to be chosen from the Elective Course List, Minor Education, Minor Economics, the other Major or the master's programmes of the Flemish Community, if chosen for Part I in Ma1)

* taught in 2009-2010
** taught in 2010-2011

Master of Geology

ELECTIVE COURSES	
GENERAL CORE	
Geology: a human perspective	3
Introduction to Entrepreneurship	4
Professional Apprenticeship A	9
Professional Apprenticeship B	24
Scientific Communication in English	5
Biotechnology - Complying with International and National Regulations	3
RESEARCH AND ENTERPRISE	
Continental Tectonics **	9
Deformation of Sediments *	3
Advanced Bio- and Geostatistics	6
Volcanology	6
Quaternary Geology and Paleontology	6
Archaeopetrology and Archaeochronometry **	5
Acquisition and Interpretation of Geochemical and Petrological Data *	5
Stable Isotope Geology	6
Evolution of Primates and Paleo-anthropology	5
Advanced Micropaleontology	6
Geological Processing of Remote Sensing Data	6
Origin of the Solar System, Early Earth and Impact Structures	6
Instrumental Methods, Physical Mineral Research and Geological Applications	6
Building Stones	5
Gemmology **	3
Basin Modelling	6
Ocean Drilling for Science and Energy *	3
Dredging and Offshore Constructions	3
Introduction to Geotechnics	3
Integrated Coastal Management	3
Seismic Hazard	3
Environmental Law	5
Financial and Cost Price Reporting in Companies	6
Business Administration	5
Economics	6
Advanced Marine Surveying for Science and Industry	6
Applications of Radiation Damage Dating Methods in the Earth Sciences	3

* taught in 2009-2010
** taught in 2010-2011

Master of Statistical Data Analysis

Course content

Increasing computer power and the professional need to extract objective information from observed data have lead to complex databases. In tandem, statistical science has become a broad discipline with well developed methods and techniques for the design and analysis of a wide range of empirical studies.
In practice, information obtained from correctly analyzed data allows to predict, adjust and even optimize processes based on evidence. On the other hand, inefficient or haphazard data gathering and analysis can lead to inferior or misleading conclusions with possibly far-reaching consequences.
For this reason, international professional and research standards in various fields demand high quality data analysis, performed by qualified statisticians. This programme offers intensive training in modern statistical methods and data analysis to scientists from a variety of fields including biology, bio-informatics, economy and marketing, environmental and life sciences, engineering, mathematics and physics, psychology and social sciences …
It is designed to sharpen problem solving skills and build experience in evidence based decision making. This complementary training enables scientists to play a distinctly important role within their discipline.

Course structure

The programme consists of five mandatory courses, four elective courses and a master dissertation. Three courses are chosen from a predefined list. In every course, the development of theory is supported by projects and assignments which help develop skills of practical data analysis and provide hands on experience with real data. The programme is taken either as a one year full-time programme or is spread over two or more years. Several courses are taught in the evening. Four mandatory courses are offered in the first semester. The programme starts with 'Principles of Statistical Data Analysis' which provides a solid background in basic statistical concepts and techniques, both from a theoretical and practical perspective.
This course runs in the first half of the semester. In the second part of the semester, statistical knowledge and data-analytic skills are further developed and applied to models for a univariate outcome in the courses 'Analysis of Continuous Data' and 'Categorical Data Analysis'. The course on 'Statistical Computing' provides the skills necessary to work with databases and statistical software focusing on the statistical programmes SAS and R. Besides the mandatory courses, several elective courses are offered in the first or the second semester. These courses focus on more specific data types and research questions. They build upon the contents of the mandatory courses. Full-time students and part-time students in their last year also start exploring literature relevant to their master dissertation, in which they will solve a practical statistical problem in an interdisciplinary context. The second semester contains the mandatory course 'Statistical Inference' that provides the general methodological basis for statistical design and analysis of empirical studies. The elective courses offered in one of both semesters include: 'Analysis of Univariate Time Series', 'Capita Selecta', 'Causality and Missing Data', 'Computational Biology', 'Data Mining', 'Epidemiology', 'Experimental Design', 'Longitudinal Data Analysis', 'Monte Carlo and Computer Intensive Methods in Statistics', 'Multivariate Data Analysis', 'Spatial Statistics' and 'Survival Analysis'. The topic of the course 'Capita Selecta' varies yearly and is typically taught by a visiting expert.

Students in their final year also finish their master dissertation and report on their methods and results both orally and in writing. The master dissertation provides students with the unique opportunity to learn first hand from an experienced statistician how the statistical method gets applied to solve real world problems. This is an important component of the programme.

> Master dissertation

During the second term the students finish the master dissertation and report in writing as well as orally about the problem, the method they used to solve the problem, and the results. The master dissertation allows the student to put into practice the acquired knowledge and to develop specific skills. This is an important integral part of the training. Those who have finished the training will actually be equipped to develop the scientific method correctly and efficiently within an applied research setting.

Career perspectives

Students who successfully finish the master programme have acquired an advanced level of statistical knowledge and data analytical skills. They are ready to contribute as independent experts to a multidisciplinary team that designs, performs, analyses and reports applied scientific research. The demand is high and found in industry, banking, government, academia and research centres for the profit as well as non-profit sector. Whatever the field of application, our masters are trained to handle practical problems in an objective scientific manner and to obtain insight into the structure of data and the underlying model. Our masters have been encouraged to think critically and be creative problem solvers.
Computational skills, flexibility, efficiency and an attitude towards continuous learning are important qualities that this programme brings to its masters and that prepare them for a successful career.

Contact

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http://www.mastat.UGent.be/

Master of Statistical Data Analysis

60 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

The programme offers a profound training in design, analysis and reporting of empirical research. It is meant for students who already have a Master degree from study fields carrying enough mathematical background within different faculties.

For Flemish degrees:

The exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE

At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:

- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
- a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
- certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.

The following students are exempted from the language requirement:

- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE

General deadlines:

- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION

Ghent University

TUITION FEE

- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS

- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME

One year programme.

Start academic year: last week of September.

Master of Statistical Data Analysis

MASTER

GENERAL COURSES	**25**
Principles of statistical data analysis	5
Statistical Computing	5
Statistical Inference	5
Analysis of Continuous Data	5
Categorical Data Analysis	5
OPTIONAL COURSES	**20**
(At least 3 to be chosen from the list mentioned below, others from the study programmes of Ghent University and other institutions of higher education of the Flemish Community)	
Analysis of Univariate Time Series	5
Capita selecta	5
Causality and Missing Data	5
Data Mining	5
Epidemiology	5
Longitudinal Data Analysis	5
Monte Carlo and Computer Intensive Methods in Statistics	5
Multivariate Data Analysis	5
Survival Analysis	5
Experimental Design	5
Spatial Statistics	5
Computational Biology	5
MASTER DISSERTATION	**15**

PREPARATORY COURSE PROGRAMME

Courses, to a total amount of at least 15 and max. 60 credits, depending on the student's previous degree, from the bachelor's and master's programmes of which the master's programmes give immediate admission to Master of Statistical Data Analysis.

Master of Space Studies

MODULES: SPACE LAW, POLICY, BUSINESS AND MANAGEMENT • SPACE SCIENCES • SPACE TECHNOLOGY AND APPLICATIONS
Organised jointly by Ghent University and Katholieke Universiteit Leuven

Course content

Human activities in space play an ever increasing role in our society. Space missions have evolved from merely showcase events that explore new technologies in new environments to utilitarian operations that serve various purposes such as telecommunications around the globe, weather prediction or advanced research in zero gravity. In order to illustrate this, the Europeans Space Agency (ESA) has estimated that only 5% of the space related industry is involved with the manufacture and launch of satellites! Therefore, space industry has grown over the past 50 years from a high profile niche activity to an economically very significant player in our society. As a consequence, it is also an important employer.
Whereas in the early years the industry trained its staff on an ad hoc basis in a developing and growing research environment, nowadays new employees enter a well established technological and business world. This implies that the space industry preferably recruits people that have already acquired the basic skills and knowledge that the industry itself has developed over the past decades. This is a considerable challenge, since the space industry estimates that in the coming years over 40000 people which belong to the pioneer generation will retire and consequently will have to be replaced by new employees!
In order to help fill this need, the K.U.Leuven and the UGent have joined efforts and are offering a "Master of Space Studies".
This master is intentionally not an exclusively technological study, but is set up interdisciplinary. It is intended to form people who have at the end of their study basic knowledge of all aspects of space activities, and who are qualified to enter the space industry where they will acquire the more specific skills necessary for their particular job. The master has an international scope and audience and is taught in English.

Course structure

The programme is conceived as a postgraduate (master-after-master) programme and as such addresses itself to students who have successfully completed an initial master programme in either the humanities and social sciences, exact sciences and technology, or biomedical sciences.
The interdisciplinary nature of the programme is set by the requirement that all students follow a common trunk of 21 credits devoted to introductory courses, by which the students get acquainted with the different aspects that together form the foundation of the space-related activities. Special care is devoted to combine a high level of knowledge transfer with the diverse backgrounds of the students.
Depending on their background and interest, students have the opportunity to deepen their knowledge through more domain-specific optional courses, for a total of 24 credits, covering the domains of (A) Space Law, Policy, Business and Mangement; (B) Space Sciences; and (C) Space Technology and Applications, with the possibility to combine the latter two.

> Master dissertation

For the master thesis (15 credits) students are embedded in a research team of one of the organising universities, or in an external institute, organisation or industrial company, in which cases an academic supervisor is assigned as a coördinator.
The master thesis should form a final piece of work of the interdisciplinary programme, in which the acquired knowledge and abilities are applied to a complex and concrete project.

Career perspectives

The technological challenges and innovative programs that typically characterise space projects make the space industry an essential vehicle to help keep our society at the forefront of innovation and research. The international character of many space projects makes the space industry also a very important element in the positioning of Europe worldwide. Therefore space industries will, for the foreseeable future, remain a growing and in some areas even booming business, with many career opportunities.
On the Flemish level, there is the "Vereniging van Vlaamse Ruimtevaartindustriëlen" (VRI), which fosters the growth of the local industries. As already mentioned, there is ESA which works on a European level, but there is also growing involvement of the EU, in particular on policy issues and earth observation, telecommunication, global positioning and defense.

Contact

Ghent University– Faculty of Sciences
International Relations Officer
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T +32 (0)9 264 50 43

Master of Space Studies

60 ECTS CREDITS • FULL-TIME OR PART-TIME • LANGUAGE: ENGLISH • DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Students should possess already a 'disciplinary' master degree.
Candidate students are specifically expected to:
- have obtained an initial master degree for which the candidates can motivate the relevance for space studies;
- have the potential to succesfully broaden their formation towards other relevant disciplines;
- present a convincing view of the importance of the programme for their professional expectations.

These expectations will be evaluated through an intake interview. Interested candidates are invited to send their CV and a comprehensive motivation to Batist.Paklons@law.kuleuven.be
The selection with respect to the initial master degree is designed to increase the student's chances for success. However, students with an initial master that does not have a direct apparent connection with space studies can still apply, and could be accepted depending on the power of conviction of their background and argumentation.

LANGUAGE
Good knowledge of the English language, both written and spoken, is essential. Non-native English speakers are required to submit a TOEFL or IELTS-certificate (TOEFL: computer-based test 213 pt., internet-based 79-80pt., paper-based test 550 pt.) or IELTS (6.5 - 7 pt.). All international students must meet the language requirements set by the International Admissions & Mobility Unit of K.U.Leuven.

PRACTICAL INFORMATION

APPLICATION DEADLINE
General deadlines:
- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION
2009-2010: K.U.Leuven

TUITION FEE
The cost of registration is € 5 600

SCHOLARSHIPS
- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME
One year programme.
Start academic year: middle of September.

STUDYPROGRAMME

GENERAL COURSES	**21**
Questions in Space Sciences	3
Space Law and Space Policy	3
Space Project Management	3
Space Sciences and Exploration	3
Life Sciences and Biology in Space	3
Orbital Mechanics and Mission Design	3
Spacecraft Design and Instrumentation	3
CLUSTERS	**18**
Subject to the coordinating institution's approval: one module	
MODULE SPACE LAW, POLICY, BUSINESS and MANAGEMENT	
Space Business and Management	6
The Law of International Organisations	6
Advanced Topics in Space Law and Space Policy	6
Introduction to Management	6
Product Development and Innovation	6
MODULE SPACE SCIENCES	
Atmospheric Sciences from Space	6
Space Weather	4
Advanced Topics in Life Siences from Space	6
Space Geodesy, Geophysics and Earth Observations	6
Astrophysics from Space	4
Synchrotron Radiation Research in Earth and Planetary Sciences	6
Plant in Space: Life Support System Applications	6
MODULE SPACE TECHNOLOGY and APPLICATIONS	
Spacionics Systems Design	3
Reference Database Management	6
Global Change Monitoring	3
Space Technology and Environment	6
Satellite and Space Communications	6
Reliability of Space Systems	4
Robotics	4
ELECTIVE COURSES	**6**
Subject to the coordinating institution's approval: courses from the above mentioned modules or from the study programmes of the Flemish Community universities	
MASTER DISSERTATION	**15**

Postgraduate Studies in Biosafety in Plant Biotechnology

Course content

This international distance e-course is aimed at training scientists and law specialists in biosafety expertise and evaluation.
The course offers a solid basis to set up and implement regulatory biosafety frameworks related to plant biotechnology, to assist in the legislation and interpretation of biosafety risk assessment, and to communicate to policymakers.

The course is interdisciplinary, in cooperation with the Faculties of Science, Political and Social sciences and the Law Faculty. It is an international programme organised in cooperation with the United Nations Industrial Development Organisation (UNIDO).
Objectives: To provide students with:
- expert information on current and potential future developments in biotechnology;
- expert information on national and international norms and regulations in biotechnology;
- advanced skills to conduct risk assessments;
- apply risk management in biotechnology;
- risk communication skills.

Course structure

The programme includes an introductory section on plant biotechnology and its applications for agriculture and industry. The main core covers the basics of risk assessment and regulatory structures, food and feed safety assessment, and environmental safety assessment. An overview of national and international regulatory systems and risk assessment and applications is included. The final section deals with risk perception and communication. At the end of the course participants will be able to conduct risk assessments and apply risk management options, while at the same time deal with public policy issues at the interface of science, government, industry, and civil society.

The course is given electronically through e-learning. Two on-campus periods are included: one in the beginning of the course at IPBO, Ghent University (BE) and one at the end. Evaluation is carried out throughout the year through interactive discussions, assignments, and written and oral exams during the second on campus session at the end of the course.

Career perspectives

The certificate awarded is suitable for individuals engaged as biosafety professionals in government agencies or industry. It is also tailored for individuals with an interest in public policy, legal and ethical aspects of biotechnology.

> Organising institutions

The course is an international programme of UNIDO within a framework of co-operation with the University of Concepción (UDEC, Chile), the University of Malaya (Malaysia), the University of Minas Gerais (Brazil) and the Marche Polytechnic University of Ancona (Italy).

Contact

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www.ipbo.UGent.be

Postgraduate Studies in Biosafety in Plant Biotechnology

60 ECTS CREDITS ◆ FULL-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: CERTIFICATE OF POSTGRADUATE STUDIES

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

A postgraduate course aims at developing an in-depth understanding and specialization in the field of competencies acquired during a previous master course (2 cycles). The general admission requirement is that the student must possess a master degree or an international degree considered equivalent. An applicant wishing to gain admission for a postgraduate on the basis of a international diploma must apply through a specific application procedure.

A maximum of 25 students will be accepted. Selection will take place based on the curriculum vitae of the applicant and will take into account the professional interest in biosafety issues related to biotechnology.
The student should be holder of one of the following diplomas:
- Master in Biology
- Master in Chemistry
- Master in Biochemistry and Biotechnology
- Master in Bio-engineering Sciences
- Master in Medicine
- Master in Law
- Master degrees considered equivalent with one of the degrees mentioned above.

LANGUAGE
At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:
- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
- a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
- certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.
The following students are exempted from the language requirement:
- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE
June 1st

ENROLLING INSTITUTION
Ghent University

TUITION FEE
€ 660; € 520 for students from least developed countries ; students working in the private sector pay a supplementary tuition fee of max. € 2050.

SCHOLARSHIPS
A limited number of grants is awarded by UNIDO for participants from African nationality who can provide evidence of being actively involved in the implementation of national biosafety regulations. The grant will cover travel and accommodation expenses for the two on campus meetings but not the course tuiton fee.

Scholarship application form can be downloaded from the course website
www.ugent.be/we/genetics/ipbo/en/education/postgraduate/postgraduate.htm

> general information about grants:
http://www.highereducation.be
http://www.studyinflanders.be

START/END OF THE PROGRAMME
One year programme.
Start academic year: last week of September.

STUDYPROGRAMME

GENERAL COURSES	**60**
Course Background	3
Applications of Biotechnology	10
Theoretical and Practical Foundations of Biological Risk Assessment	12
Food and Feed Safety	8
Environmental Safety	9
National and International Regulatory Systems	7
Risk Perception and Risk Communication	11

Postgraduate Studies in Weather and Climate Modeling

Organised jointly by Ghent University and partner institutions: Royal Meteorological Institute of Belgium - Belgocontrol

Course content

The issue of climate change has come recently under the attention of policy makers and the public alike, but high-impact weather (such as severe thunderstorms with associated flooding, deep cyclones with strong wind gusts, etc) has been a major worry for centuries. Only now have scientific knowledge and numerical techniques become sufficiently mature that we may be able to effectively predict these extreme conditions.
The ultimate goal is to prepare young scientists for research in international projects such as THORPEX (www.wmo.int/thorpex/about).
The Postgraduate Studies in Weather and Climate Modeling offers the essential courses needed to start research in meteorology and numerical weather prediction.

Course structure

The study programme covers nine courses which have a total weight of 33 ECTS in two semesters (in one academic year).

Career perspectives

Researcher in Meteorological Services in Europe, Phd research.

Contact

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Department of Mathematical Physics and Astronomy
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http://wns.UGent.be/meteo_nwp/

Postgraduate Studies in Weather and Climate Modeling

33 ECTS CREDITS ◆ PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: CERTIFICATE OF POSTGRADUATE STUDIES

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Scientists with some background in mathematics and/or physics who whish to start research in Numerical Weather Prediction.
The course requires some physical and mathematical background from the students. Therefore there are two groups of students who can start with these studies:
Masters who have direct access to the programme:
- Master in de wiskunde
- Master in de fysica en de sterrenkunde
- Master in de sterrenkunde
- Master in de fysica
- Master in de geologie
- Master in de geografie
- Master in de geomatica en de landmeetkunde
- Master in de ingenieurswetenschappen
- Master in de bio-ingenieurswetenschappen

Masters who have access subject to approval:
- Master in de wiskundige informatica
- Master in de statistiek
- Master in de chemie
- Master in de biochemie en de biotechnologie
- Master in de biologie
- Master in de mariene en lacustriene wetenschappen
- Master of nematology
- Master in de industriële wetenschappen
- Master in de aardobservatie
- Master in de milieutechnologie en de milieuwetenschappen
- Master of ecological and marine management
- Master of environmental sanitation
- Any other Master degree

LANGUAGE

At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:
- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
- a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
- certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.
The following students are exempted from the language requirement:
- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE
General deadlines:
- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION
Ghent University

TUITION FEE
30 ECTS credits: € 526,80
(credit contract: € 58,80 + (credits x € 15,60)

SCHOLARSHIPS
general information about grants:
- http://www.highereducation.be
- http://www.studyinflanders.be

START/END OF THE PROGRAMME
One year programme.
Start academic year: last week of September.

STUDYPROGRAMME

GENERAL COURSES	33
General Meteorology	4
Climatology	3
Dynamic Meteorology	4
Physical Meteorology	3
Numerical Techniques	3
Data Assimilation	3
Numerical Weather Prediction	4
Predictability	3
Air Pollution and Chemical Transport Models (CTM)	3
Remote Sensing	3

Master in Photonics Science and Engineering

Organised jointly by Ghent University and Vrije Universiteit Brussel

Course content

Photonics is now widely recognized as a major innovation enabling discipline for the 21st century. It can be defined as that field of science and technology where the fundamental properties of light and its interaction with matter are studied and applied.

Since several decades photonics has been penetrating in ever more applications and household appliances. At present, photonics is a discipline of key importance in industrial sectors such as tele- and data communication, display and camera industry, biotechnology, solar energy, medical instrumentation, laser material processing, etc.

The Master of Photonics Science and Engineering is a multi-disciplinary programme covering basic physics, material technologies, electronics and applications in different fields. Students will be trained to become specialists in the field. In addition, students will be brought in contact with European culture and will get the chance to live in two Belgian cities cities (Brussels and Ghent) with a long and still visible history.

Course structure

The Master of Photonics Science and Engineering is a 2-year (120 credits) fully English-taught programme, with the students spending their first year one semester at each university (UGent and VUB) and their second year in one of both (Ghent or VUB), with the choice made by the student.

The programme is based on 4 pillars: a strong backbone of core photonics, specialisation in a broad spectrum of advanced photonics, a secondary specialisation in a related field (telecom, biomedical engineering etc.) and a master thesis.

The first year is mainly devoted to a programme of core photonics courses, complemented by a number of advanced photonics courses as well as a number of multidisciplinary courses. In the second year the students continue to take advanced photonics courses and multidisciplinary courses and do their master thesis in a field of their interest.

During the first year, the students spend the first semester at UGent and the second semester at VUB. They take core photonics courses for 44 credits and elective courses for the remaining 16 credits. The second year the students take mostly elective courses and 24 credits master dissertation. The elective courses are chosen from :

- courses for minimally 16 credits from the list of elective courses in Photonics;
- courses for minimally 20 credits from the Engineering Master programmes of the Faculty of Engineering at UGent or VUB;
- courses for minimally 6 credits from the list of socio-economic courses of the Faculty of Engineering at UGent or VUB.

Career perspectives

Graduates are expected to go on to a broad range of future opportunities, including:

- Research in high-technology companies, in particular photonics-related companies
- Research in academic laboratories and research institutes (possibly in PhD context)
- Development of new photonic products in industry
- Technical support in a company for its products or services
- Technical marketing and sales.

> Master dissertation

The master dissertation is an original piece of work about a specific topic in photonics. In general it consists of a literature study combined with practical work in the form of simulation, modeling, fabrication and/or measurments of photonic components.
The completion of the master dissertation is a requirement for obtaining the degree of Master of Photonics Science and Engineering.

Contact

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Bert.Coryn@intec.UGent.be - T +32 (0) 9 264 98 28

Master in Photonics Science and Engineering

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Foreign students need to be in possession of a bachelor degree in Electrical engineering, in (Applied) Physics, Material Science or an equivalent of this to be directly admitted to the programme.
Students in possession of another bachelor degree might need to follow a preparatory programme. The educational board will make the final decision wether to accept the application or not.
For Flemish degrees:
the exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE
Sufficient English language ability. The following shall be accepted as sufficient proof:

- the prospective student has already successfully completed a one-year English-language study programme, either at a different institution of higher education or at a secondary school;
- a TOEFL-TEST, taken as recently as within the last two years, showing a score of at least 570 (paper-based) or 87 (internet-based)
- an original "test report from" (TRF) from IELTS, issued as recently as within the last two years, showing a score of at least 6.5, with a minimum of 6.0 per each part

If prospective students hold a secondary education diploma, an academic Bachelor's diploma or a Master's diploma awarded by an educational institution that is duly recognised by the Flemish Community, no proof of sufficient English language ability must be provided.

PRACTICAL INFORMATION

APPLICATION DEADLINE
General deadlines:

- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION
Ghent University or VUB

TUITION FEE

- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS

- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME
Two year programme.
The programme starts in the beginning of September.

Master in Photonics Science and Engineering

MASTER (YEAR 1)

GENERAL COURSES	**44**
General courses UGent:	
Mathematics in Photonics	4
Dutch Language Course	4
Microphotonics	6
Optical Materials	6
Lasers	4
General courses VUB:	
Optical Communication Systems	6
Photonics Laboratory	4
Physics of Technological Processes	4
Sensors and Microsystem Electronics	6
ELECTIVE COURSES	**16**
During the 1st and 2nd year courses to be chosen from:	
Courses for minimally 20 credits from the Engineering Master programmes of the Faculty of Engineering at UGent or VUB	
Courses for minimally 6 credits from the list of socio-economic courses of the Faculty of Engineering at UGent or VUB	
Courses for minimally 16 credits from the list of elective courses in Photonics, as listed below:	
– Photonics	5
– Quantum Physics for Electronics and Photonics	5
– Design of Refractive and Diffractive Optical Systems	4
– Optical Spectroscopy of Materials	4
– Photonic Semiconductor Devices and Technology	4
– Display Technology (Partim)	4
– Nonlinear and Quantum Optics	4
– Advanced Photonics Laboratory	4
– Optical Sensors	4
– Photovoltaic Energy Conversion	4
– High Speed Photonic Components	4
– Internship in Photonics	4
Other credits from the study programmes of UGent or VUB	

MASTER (YEAR 2)

GENERAL COURSES	**4**
Students take the course listed below at the universities where they take the second year of the training programme	4
General courses UGent:	
Recent Trends in Photonics	4
General courses VUB:	
Recent Trends in Photonics	4
ELECTIVE COURSES	**32**
During the 1st and 2nd year courses to be chosen from:	
Courses for minimally 20 credits from the Engineering Master programmes of the Faculty of Engineering at UGent of VUB	
Courses for minimally 6 credits from the list of socio-economic courses of the Faculty of Engineering at UGent or VUB	
Courses for minimally 16 credits from the list of elective courses in Photonics, as listed below:	
– Photonics	5
– Quantum Physics for Electronics and Photonics	5
– Design of Refractive and Diffractive Optical Systems	4
– Optical Spectroscopy of Materials	4
– Photonic Semiconductor Devices and Technology	4
– Display Technology (Partim)	4
– Nonlinear and Quantum Optics	4
– Advanced Photonics Laboratory	4
– Optical Sensors	4
– Photovoltaic Energy Conversion	4
– High Speed Photonic Components	4
– Internship in Photonics	4
Other credits from the study programmes of UGent or VUB	
MASTER DISSERTATION	**24**

Master of Science in Photonics

Erasmus Mundus Master Programme jointly offered by Ghent University and partners

Organising institutes

Five leading research and educational institutions in Europe are collaborating to offer a joint Erasmus Mundus Master of Science programme in Photonics, providing a top-quality education in all aspects of photonics. The master programme has a duration of two years (120 ECTS credits), with students spending a year in two different countries.
Coordinator: Ghent University (Belgium).
Partners: Vrije Universiteit Brussel (Belgium), St-Andrews University and Heriot-Watt University (U.K.), Royal Institute of Technology, Stockholm (Sweden).

Course content

Photonics is now widely recognized as a major innovation enabling discipline for the 21st century. It can be defined as that field of science and technology where the fundamental properties of light and its interaction with matter are studied and applied.

Since several decades, photonics has been penetrating in ever more applications and household appliances. At present, photonics is a discipline of key importance in industrial sectors such as tele- and data communication, display and camera industry, biotechnology, solar energy, medical instrumentation, laser material processing etc.

The Erasmus Mundus Master of Science in Photonics builds upon 3 local MSc programmes in Belgium, Sweden and the UK. The research activities of the five involved universities cover nearly all relevant fundamental research (e.g. nano-, and micro-photonic components in silicon, III-V semiconductors and polymers, femto-second lasers) and applications (e.g. optical sensing, data and telecommunications, quantum cryptography, displays).

The Master of Science programme in Photonics is a multidisciplinary programme covering basic physics, material technologies, electronics and applications in different fields. Students will be trained to become specialists in the field. In addition, students will be brought in contact with European culture and languages, and will get the chance to live in several European cities (Brussels, Edinburgh, Ghent, Saint-Andrews and Stockholm) with a long and still visible history.

Course structure

The Erasmus Mundus MSc programme in Photonics is a 2-year (120 ECTS credits) fully English-taught programme, with the students spending one year in one country and the other year in another country.

The first year is mainly devoted to a programme of core photonics courses with essentially the same content at all institutes, complemented by a number of advanced photonics courses as well as a number of multidisciplinary courses.

In the second year the students move to another location where they continue to take advanced photonics courses and multidisciplinary courses and where they do their Master thesis in a field of their interest. The choice of second year location is mainly the result of the particular research interests of the student. Indeed, the 5 different universities offer thesis work in different particular sub-fields of photonics.

European students have the opportunity to spend 3 months of the second Master year at one of our non-European partners: the University of Sydney (Australia), Zhejiang University (China) and the University of Tokyo (Japan)

> Master dissertation

The master dissertation is a requirement for every candidate to obtain a master degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review part, a theoretical reflection and an original analysis of the topic.

Career perspectives

The aim of these master programs is to form engineers and scientists with firm basic knowledge in the field of photonics and with the skills to apply this knowledge to the design, realisation and the management of photonic systems for a broad range of application domains.
Furthermore the students will have the opportunity to broaden their knowledge and skills in other domains, such as ICT, biosciences, physics and chemistry of materials, industrial management etc.
Therefore graduates are expected to go on to a broad range of future opportunities, including:- research in high-technology companies, in particular photonics-related companies;- research in academic laboratories and research institutes (possibly in PhD context);- development of new photonic products in industry;- technical support in a company for its products or services;- technical marketing and sales.

Contact

Ghent University – Faculty of Engineering
Department of Information Technology
Secretariat of Erasmus Mundus
Master of Science in Photonics
Sint-Pietersnieuwstraat 41, B-9000 Ghent - Belgium
T +32 (0) 9 264 33 39 (Photonics Secretariat)
F +32 (0) 9 264 35 93 - EMMP@intec.UGent.be
www.master-photonics.org

Master of Science in Photonics

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

A bachelor's degree or recognized equivalent from an accredited institution (minimum three years full time study or 180 ECTS credits) in Electrical Engineering, Applied Physics, Physics, Materials Science or a related discipline. Students in their last year of such a bachelor programme will however also be considered.
For Flemish degrees:
the exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE
Sufficient English language ability. Candidates from countries where English is not one of the official languages, must prove their knowledge of English, with a certificate or by proving that they have received their education in English. A minimum TOEFL score of 570 or 87 for the internet based tests or a score of 6.5 of IELTS with minimum of 6.0 per each part are required.

PRACTICAL INFORMATION

APPLICATION DEADLINE
For non-EU students:
– online registration: 15 January
– paper submission: 20 January
For EU-students:
– overall deadline: 31 May
www.master-photonics.org

ENROLLING INSTITUTION
Ghent University

TUITION FEE
– for non-EU students: € 7,000 (annually)
– for EU-students: € 2,000 (annually)

SCHOLARSHIPS
– for non-EU students: Erasmus Mundus grants
– for EU-students: limited number of grants to cover tuition fees

START/END OF THE PROGRAMME
Starts with the beginning of the academic year (depending on entry institute).
Two year programme.

Master of Science in Photonics

MASTER (YEAR 1)

GENERAL COURSES

SCOTLAND

Sem 1, University of St. Andrews

Photonics Laboratory	7
Photonics Applications	7
Displays and Nonlinear Optics	5
Laser Physics	10

Sem. 2, Heriot-Watt University

Photonics Experimental Laboratory	7
Semiconductor Optoelectronics	7
Geometrical, Fourier Optics and Nonlinear Optics	7
Fibre-optic Communications	7
Erasmus Mundus Photonics Summer Course	3

SWEDEN

Sem. 1, KTH Stockholm

Optics	9
Principles of Communications	6
Quantum Electronics	7,5
Theory and methodology of Science with applications	7,5

Sem. 2, KTH Stockholm

Fibre-optical communications	7,5
Photonics	7,5
Optics, continuation course	6
Summer school	3

ELECTIVE COURSES

SWEDEN

Sem. 1, KTH Stockholm

Swedish Society, Culture and Industry in Historical Perspective	6
Simulation of Semiconductor Devices	7.5

Sem. 2, KTH Stockholm

Information searching	1.5
Photonics Presentations	1.5
Swedish 1, Elementary level	7.5
Laser Engineering	7.5
Optical Measurement Techniques	6
Molecular Electronics	7.5

BELGIUM

Sem. 1, Ghent

Dutch language course	4
Microphotonics	6
Optical materials	6
Mathematics in photonics	4
Lasers	4

Sem. 2, Brussels

Physics of technological processes	4
Photonics laboratory	4
Sensors and Microsystem Electronics	6
Optical communication systems	6
Summer school	3

ELECTIVE COURSES **13**

- Non-linear and quantum optics	4
- Optical sensors	4
- Photovoltaic energy conversion	4
- Design of diffractive and refractive optical systems	4
- Optical spectroscopy of materials	4
- Display technology (partim)	4
- High speed photonic components	4
- Photonic Semiconductor Devices and technology	4
- Internship in Photonics	4
- Quantum Physics for Electronics and Photonics	5
- Advanced Photonics Laboratory	4
- Photonics	5

Master of Science in Photonics

MASTER (YEAR 2)

GENERAL COURSES **30**

SCOTLAND

Sem. 1 Heriot Watt University

Advanced Photonics Laboratory	7.5

Sem. 1 University of St. Andrews

Project Preparation	4
Advanced Photonics Laboratory	7

ELECTIVE COURSES

Sem. 1, University of St. Andrews

SCOTLAND

Laser Physics 2	7
Optoelectronics and Nonlinear Optics 2	7
Physics of Electronic Devices	7
Biophotonics	7
Photonics Applications	7
Displays and Nonlinear Optics	5

Sem. 2, University of St. Andrews

Experimental Quantum Physics at the Limit	7
Quantum Optics	7

Sem. 1, Heriot-Watt

Foundations of Energy	7.5
Nano Physics	7.5
Nano Photonics	7.5
Design, Modelling and Packaging of MEMS	7.5
Digital Signal Processing	7.5
Data Mining and Machine Learning	7.5
Nano Chemistry	7.5
Nano Science Primer	7.5
Renewable Energy Technologies	7.5
Cell Culture and Tissue Engineering	7.5
Networks and Communications	7.5
Image Processing	7.5

Sem. 2, Heriot-Watt

Embedded Software	7.5
Image Processing	7.5
Sensors and Actuators	7.5
Principles of Mobile Communications	7.5
Advanced Digital Electronics	7.5
Laser Applications and Engineering	7.5
Network Applications	7.5
Demand Management and Energy Storage	7.5
Numerical Computation and Statistics	7.5

MASTER DISSERTATION **30**

SWEDEN

Sem. 1, KTH Stockholm

Swedish Society, Culture and Industry in Historical Perspective	6
Simulation of Semiconductor Devices	7.5
Photonics laboratory	4.5
Microwave engineering	7.5

Sem. 2, KTH Stockholm

Information Searching	1.5
Photonics Presentations	1.5
Swedish 1, Elementary Level	7.5
Laser Engineering	7.5
Optical Measurement Techniques	6
Optical Networking	7.5
Molecular Electronics	7.5
Advanced semiconductor materials	7.5

Sem. 1 and 2, KTH Stockholm

Internship in Photonics	3

MASTER DISSERTATION **30**

GENERAL COURSES **8/12**

BELGIUM

Sem. 1 and 2: Ghent and Brussels

Dutch language course	4
Recent trends in photonics	4

ELECTIVE COURSES **8/12**

High speed photonic components	4
Non-linear and quantum optics	4
Optical sensors	4
Photovoltaic energy conversion	4
Advanced Photonics Laboratory	4
Photonic Semiconductor Devices and technology	4
Internship in Photonics	4
Optical spectroscopy of materials	4
Display technology (partim)	4
Design of diffractive and refractive optical systems	4

MULTIDISCIPLINARY ELECTIVE COURSES **10/14**

Subject to approval of the PAG and of the Acad. Boards of the organising universities: to be chosen from the engineering Master programmes of the Faculty.

MASTER DISSERTATION **30**

Master in Nuclear Fusion Science and Engineering Physics

Erasmus Mundus Master Programme jointly offered by Ghent University and partners

Organising institutes

By forming a network of institutes the European Master in Nuclear Fusion Science and Engineering Physics (FUSION-EP) programme builds on excellent competencies in the area of high-level multinational research-oriented education in fusion-related engineering physics in close relation to the research activities of the partners, and with a well-integrated language and cultural experience.
The joint FUSION-EP programme is offered by Ghent University, Belgium (coordinator); Université Henri Poincaré, Nancy, France; Kungliga Tekniska Högskolan Stockholm, Sweden; Universidad Complutense de Madrid, Spain; Universidad Carlos III de Madrid, Spain; Universidad Politécnica de Madrid, Spain; Universität Stuttgart, Germany. The joint or multiple degrees are recognised in Belgium, France, Sweden, Spain and Germany. Thanks to action 3, European students can also spend three months in the second Master in one of the following institutes: UCLA, USA; University of Wisconsin-Madi-son, USA; St. Petersburg State Polytechnic University, Russia; Moscow Engineering Physics Institute, Russia; University of Science and Technology of China, China.

Course content

The studies in Engineering Physics are devoted to the technical applications of physics and strongly supported by the research activities in the different laboratories within the Consortium.
By combining in a balanced way the basic concepts of a degree in engineering with the essentials of an education as an engineering physicist, these studies seek to train engineers capable of performing or leading technical and scientific research in universities, research establishments or industry.
The engineering component of the studies makes the physics engineer familiar with the analysis, design and optimization of new and existing systems, products, machines, materials etc., in which simplification to manageable system descriptions (from rules of thumb to expert systems) is essential. In the physics component the reductionist approach holds centre stage; here experiments and mathematical modelling seek to reduce physical phenomena to their very essence and to discover the physical laws applicable. Even though the approach has a more philosophical slant, the rigorous attitude is essential, and a physical theory should stand a validation by experiment.
Physics engineers are trained, first and foremost, for R&D purposes. Their wide-ranging education makes them fit for all companies and research establishments where interdisciplinary R&D requires in-depth knowledge of physics. They will constitute a substantial percentage of the large number of additional researchers required for the establishment of the EU as the best centre of excellence in the world. Both components of the studies especially qualify the physics engineer to fill executive jobs at a later stage.

> Master dissertation

The master dissertation is a requirement for every candidate to obtain a master degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review part, a theoretical reflection and an original analysis of the topic.

Course structure

Student mobility is an inherent part of the programme structure and philosophy. We propose the following concrete mobility scheme. Each student resides at three universities in three different countries (60 ECTS credits at university A, 30 at B and 30 at C). Furthermore all students meet in the yearly summer event. Scholar co-operation and mobility is particularly promoted by the structural connection between the specialised track education provided in semester 3 and the master thesis in the same track in semester 4. Two Master thesis tutors (responsible to guide the student in the 3rd and 4th semester) are assigned to each student. The summer event plays a crucial role here, but this is only the yearly culmination point of contacts between the involved teachers and research groups.
The two-year FUSION-EP programme is organised over four semesters. The total training programme has to amount up to 120 ECTS and fulfil certain requirements concerning mobility. This ensures a Master programme with a strong common standard and a maximum flexibility to accommodate for students with different interests, language knowledge and background.
EU-students can spend three months in one of the partner institutions in China, Russia or USA in the second Master (action 3).

Career perspectives

The EU fusion programme is at the forefront of international fusion research and engineering. Fusion research is entering a new phase. The construction of ITER, the Broader Approach activities, and the preparation for DEMO require an expansion of the fusion programme and a shift of the emphasis from plasma physics to engineering and nuclear materials. There is also a growing need for competences on nuclear project related issues such as project management, nuclear licensing, quality assurance, risk assessment, and management of procurement processes, as well as a need for stronger collaboration with industry. During the first 10 year period, the ITER Organisation will have a need for graduates in project-oriented fusion technology, diagnostics, plasma heating, modeling and computing. During the subsequent 20 year phase, its need will evolve progressively towards experimental plasma physics and data analysis.

Contact

Ghent University – Faculty of Engineering
Department of Applied Physics
Prof. Ir. G. Van Oost
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EMFusion@UGent.be
Guido.VanOost@UGent.be
http://em-master-fusion.org/

Master in Nuclear Fusion Science and Engineering Physics

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

The minimum degree required is a Bachelor degree in Physics or Engineering. Specialisation in Plasma and Nuclear Physics is advised but not obligatory. Research in Plasma or nuclear physics is an asset. Three recommendation letters are required. If the institute you are from is famous for plasma or nuclear research, this is an asset too.
For Flemish degrees:
the exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE
The applicant must prove to have an advanced knowledge of the English language by providing:
EU-students:
– an official certificate which confirms that the applicant has successfully completed at least one year of a study programme of which the medium of instruction was English, either at an institute of Higher Education or a Secondary School;
Non-EU-students:
– a recent TOEFL-TEST with a score of at least 550 (paper-based) or 213 (computer-based) - the UGent TOEFL code is 2643 (the test can be maximum two (2) years old);
– a certificate of the British Council (IELTS) with an overall band of 6.0 (the test can be maximum two (2) years old); (GRE test score is optional)
– a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE
– For non-European students: 15 January
– For European students: 15 June
http://em-master-fusion.org/

ENROLLING INSTITUTION
Ghent University

TUITION FEE
– for non-EU students: € 6,000
– for EU-students: € 1,000

SCHOLARSHIPS
– for non-EU students: Erasmus Mundus grants
– for EU students: grants to spend 3 months in one of the partner institutions in China, Russia or USA in second Master (action 3).

START/END OF THE PROGRAMME
Starts with the beginning of the academic year (depending on entry institute).
Two year programme.

Master in Nuclear Fusion Science and Engineering Physics

MASTER (YEAR 1)

GENERAL COURSES **45**

GHENT UNIVERSITY (Belgium)

Applied Electromagnetism	6
Dutch Language and Flemish Culture	6
Cross-Course Project	6
Computational Solutions of Wave Problems	6
Atomic and Molecular Physics	6
Plasma Physics	6
Nuclear Instrumentation	6
Continuum Mechanics	6

In view of the expertise of the partners, the programme offers three programme tracks to the student:
- T1: Plasma physics (fusion-oriented)
- T2: Computational methods in physics
- T3: Instrumentation and radiation

ELECTIVE COURSES **15**

GHENT UNIVERSITY (Belgium)

PREPARATORY COURSES

Statistical Physics	6
Quantum Mechanics II	6

PLASMA PHYSICS

Semiconductor Component Physics	6
Physical Chemistry	6
Plasma Technology and Fusion Technology	6

COMPUTATIONAL METHODS IN PHYSICS

Electromagnetism and Relativity Theory	6

INSTRUMENTATION AND RADIATION

Materials Observation Techniques	6
Photonics	5

KUNGLIGA TEKNISKA HÖGSKOLAN (Sweden)

See www.opleidingen.UGent.be

UNIVERSIDAD COMPLUTENSE DE MADRID
UNIVERSIDAD POLITÉCNICA DE MADRID
UNIVERSIDAD CARLOS III DE MADRID (Spain)

See www.opleidingen.UGent.be

UNIVERSITÉ HENRI POINCARÉ, NANCY I (France)

See www.opleidingen.UGent.be

UNIVERSITÄT STUTTGART (Germany)

See www.opleidingen.UGent.be

MASTER (YEAR 2)

GENERAL COURSES **6**

GHENT UNIVERSITY (Belgium)

Dutch Language and Flemish Culture	6

ELECTIVE COURSES **24**

GHENT UNIVERSITY (Belgium)

PLASMA PHYSICS

- Surface Physics and Thin Films	6
- Composites	6
- Physical Materials Science	6
- Optical Materials	6
- Simulations and Modelling for the Nanoscale	6

COMPUTATIONAL METHODS IN PHYSICS

- Mathematical Methods	6
- Fluid Mechanics	6
- Antennas and Propagation	6
- Advanced Electromagnetics	6

INSTRUMENTATION AND RADIATION

- Nuclear Instrumentation	6

ELECTIVE COURSES

PARTNER UNIVERSITIES

See www.opleidingen.UGent.be

MASTER DISSERTATION **30**

International Master of Science in Fire Safety Engineering

Erasmus Mundus Master Programme jointly offered by Ghent University and partners
Organised jointly by University of Edinburgh (UK), Ghent University (Belgium), University of Lund (Sweden)

Course content

The learning outcomes comprise:
- to master the scientific knowledge to understand, critically evaluate and analyze the phenomenon fire and its consequences;
- to critically evaluate and judge risk with respect to fire and explosions, compute and design different types of fire protection concerning structures, passive fire protection, detection and supression;
- to judge the human behaviour in case of fire;
- to communicate and collaborate with colleagues within the multidisciplinary domain of Fire Safety Engineering;
- to have the attitude for permanent study in the professional domain;
- to have basic knowledge of European culture;
- to have basic knowledge of at least two European languages.

Course structure

The first semester, covering basic topics in fire safety engineering, is taught in Ghent or Edinburgh. All students spend the second semester in Lund, with emphasis on enclosure fire dynamics, risk analysis and human behaviour. The third semester is again taught in Ghent (for general FSE) or Edinburgh (with focus on fire and structures engineering in the context of FSE). The fourth semester is devoted to the master's thesis, hosted by one or more of the three institutes.

Career perspectives

There is a strong European trend from prescriptive towards performance-based fire safety designs. This goes hand in hand with a strong need for advanced knowledge in the multidisciplinary field of Fire Safety Engineering. The convergence of the three most respected institutions in this field will help redefine the professional needs for the practice of PBD in FSE. Consequently, the masters of the proposed EMMC will be very well prepared for professional activities within the evolving field of FSE, as they will obtain a broad high level knowledge as a benefit from the joint expertise of three partners with a leading role in FSE research and education in Europe. Furthermore, they will develop a network that will support the transformation of the practice of FSE.

The masters can find a job as fire safety engineer:
- in specialized consultancies;
- in design bureaus for structural stability and/or technical equipment of buildings;
- in architectural and design firms;
- in fire prevention services of larger cities;
- as responsible person for fire prevention in large industrial complexes;
- in prevention departments of fire brigades;
- in fire protection equipment industry;
- as fire experts in insurance companies;
- as fire experts in authorities;
- in standard testing laboratories;
- in environmental impact assessment consultancies;
- in health and safety organisations;
- in research and education institutes.

> Master dissertation

The student applies his/her knowledge of Fire Safety Engineering.

Contact

Erasmus Mundus IMFSE Coordinator: Prof. Bart Merci
Erasmus Mundus IMFSE Administrator: Elise Meerburg

Ghent University
Department of Flow, Heat and Combustion Mechanics
Sint Pietersnieuwstraat 41, B-9000 Gent, Belgium
e-mail: IMFSE@UGent.be
www.imfse.ugent.be

International Master of Science in Fire Safety Engineering

120 ECTS CREDITS ◆ FULL-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: JOINT MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Bachelors or Masters in:
architecture, civil engineering, electrical engineering, electro-mechanical engineering, chemical engineering, engineering physics, materials science, industrial engineering and operations research, urbanism and spatial planning.
Academic qualifications:
Others on the basis of a study of individual skills (e.g. fire safety consultants; fire prevention officers, fire brigade officers, building designers, building services engineers, architectural practitioners)

LANGUAGE

English language ability is a basic requirement, therefore the applicants must provide us one of the following certificates as a proof of there knowledge:
- a recent (= maximum two years old) TOEFL Certificate: minimum score is 560 (paper-based), or 110 (internet-based) or higher (the institution code for Ghent University is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.5;
- a recent first certificate in English of the University of Cambridge;
- a recent certificate of a University Language Centre testifying that the student masters the necessary knowledge of English to function academically (the minimum CEF-level is C1).

PRACTICAL INFORMATION

APPLICATION DEADLINE

Non- EU students:
- for third country students applying for an Erasmus Mundus grant: December 31, 2010;
- "self sponsored" non-EU students: March 1, 2010.

EU students
- EU students applying for an Erasmus Mundus grant: April 15, 2010.

www.imfse.UGent.be

ENROLLING INSTITUTION

Ghent University

TUITION FEE

Non- EU students
The tuition fee for non-EU students is set on € 8,000/year. This amount covers all classes and an insurance scheme. Students are expected to finance their accommodation, insurances, living and travel costs themselves.
EU students
The tuition fee for EU students is set on € 6,000 /year. This amount covers all classes and an insurance scheme. Students are expected to finance their accommodation, insurances, living and travel costs themselves.
EU-students with Erasmus Mundus scholarship (Cat.B) only pay a tuition fee of € 4,000 (the remaining € 2,000 of the tuition fee is waivered as per EACEA-guidelines).

SCHOLARSHIPS

Non- EU students
Erasmus Mundus-scholarships for non-EU students are to be considered as "full scholarships" covering all necessary costs of the student during his/her study period in Europe. Over 2 years, the total value of the scholarship will be of € 48,000. This amount of € 48,000 includes a fixed contribution of € 8,000 to travel and installation, a contribution to the EMMC participation costs of € 8,000 per year (covering the annual tuition fees), and monthly installments of € 1,000 per month.
EU students
The Erasmus Mundus-scholarship for EU students is considered as a "financial contribution". Over 2 years, the total value of the scholarship will be of € 20,000. This amount of € 20,000 includes a contribution to the EMMC participation costs of € 4,000 per year (covering the annual tuition fees), and monthly installments of € 500 per month.

START/END OF THE PROGRAMME

Two year programme.
Start academic year: last week of September.

International Master of Science in Biomedical Engineering

Erasmus Mundus Master Programme jointly offered by Ghent University and partners
Organised jointly by University of Groningen (The Netherlands), Aachen (Germany), Dublin (Ireland), Ghent and Brussels (Belgium), Prague (Czech Republic).

Course content

After year 1, students will have basic knowledge on:
- Anatomy of the musculoskeletal, circulatory, digestive, respiratory, excretory, endocrine and nervous systems and general knowledge of tissues;
- Physiology of the muscular, circulatory, digestive, respiratory, sensory and nervous system;
- General (patho)physiologic mechanisms (inflammation, infection, immunology, repair);
- Principles of biochemistry and cell biology;
- Bio-instrumentation; overview of diagnostic instruments, their possibilities, limitations, physical principles, the phenomena they measure, the relation with the required information;
- Medical imaging in terms of an overview of present equipment for diagnostics, their possibilities and limitations, their physical principles, the phenomena they measure;
- Biochemistry in terms of cell compartments; biological macromolecules; enzyme mechanisms; structure and function of membranes, antibodies, carbohydrates, lipids and proteins.

And advanced knowledge of:
- Biomaterials in terms of an overview of potential materials, their properties, applications and limitations, in terms of biocompatibility and failure mechanisms;
- Signal analysis, system dynamics and computational mathematics;
- Biomechanics in terms of statics, mechanics of materials (strength, stiffness, stress, deformation), dynamics (kinematics, kinetics, including gait analysis);
- Biotransport in terms of heat transport, mass transport, biofluid mechanics;
- Design/development; methodology, risk analysis, project management, market survey;
- Ethics, including regulatory affairs, social implications;
- Practical training in a European industry and hospitals, entrepreneurship as part of their professional development, IP.

Student skills: students are able to:
- apply knowledge and understanding in designing new/ improved diagnostic instruments;
- apply knowledge and understanding in designing new or improved therapy devices;
- make judgements, integrating medical, cultural, social and ethical insights into her/his work;
- communicate in English having very good command of written and spoken language;
- communicate in one other language on a basic level, being the language of a host country;
- co-operate with other biomedical engineers and with medical experts;
- co-operate with international colleagues;
- reason soundly and to critically reflect on their own and others work.

After year 2,
- Students have advanced knowledge of a particular field in Biomedical Engineering (one of the specialisations, offered by the consortium);
- Students are able to apply and integrate knowledge of that particular field;
- Students are able to perform a research or design project by integrating all acquired knowledge and skills, and to show appropriate behaviour given the professional context;
- Students are able to present their work in English both in writing and orally, and respond adequately to criticism.

Course structure

During the **first two semesters**, in total 60 ECTS, each university gives course elements on basic biomedical engineering topics. The programme of these two semesters, offered by each consortium university is comparable in content and will contain at least the following medical course elements:
- Anatomy and Histology; (Patho)physiology; Ethics

and the following general engineering course elements:
- Methodical Design; Project Management (including teamwork); Biochemistry; Biotransport ; working culture (comprising a traineeship, lectures on health care organisation and culture)

and the following engineering course elements, focused on diagnostics:
- Imaging techniques; Biomedical instrumentation; Signal analysis
- and the following engineering course elements, focused on therapy:
- Cell Biology; Biomaterials; Biomechanics

Every course element comprises at least 5 ECTS. These course elements define the basic level of competence of students. With these courses the student can follow every specialisation, offered in the third semester. When a student has followed a course element in the Bachelor's training, (s)he will choose an elective course element, offered by the university. Traineeships have to be followed in a hospital or industry.

In the **third semester** (30 ECTS) course elements on a specific topic will be given. Each university will offer several unique specialisations, based on keylines in research, so students get state-of-the-art knowledge, preparing them optimally for future developments in BME.

University of Groningen
specialisation: Biomaterials & Nanotechnology, Imaging Physics, Bionics, Audiology
University of Ghent & Brussels
specialisation: Radiation physics & Nuclear imaging processing, Computational methods for medical applications
University of Dublin
specialisation: Tissue biomechanics & Regenerative Medicine, Neural Engineering
University of Prague
specialisation: Medical Instrumentation, Modern physical methods in BME, Medical Imaging Instrumentation
University of Aachen
specialisation: Tissue engineering, Artificial Organs & Implants, Image-guided therapy & molecular imaging

International Master of Science in Biomedical Engineering

General work
The students also prepare proposals (5 ECTS) for their Master's project in this semester. First they select a topic. All participating universities will offer Master's project topics, focussed on their specialisations. Then the students perform a literature search to become familiar with the topic. This phase is finished by an extensive formulation of the study subject and strategy.

The **fourth and last semester** (30 ECTS) involves an individual Master's project.

> Master dissertation

An individual Master's project will be performed by the student. This project could be a research assignment or a design assignment. The project will be finished with a report and an oral presentation. During this Master's project the student has to apply all knowledge and skills that have been learned:
- to solve a problem by designing a device (in case of a design assignment);
- to realise answers to a scientific question by performing scientific research (in case of a research assignment).

Each student will have two supervisors, one from the institute where the study is performed and one from another consortium university. Assessment will be done by a report and a presentation.

Career perspectives

Students are trained to perform a research project and critically reflect on his/her work and are well prepared to function as a PhD-student at a university or perform research at a large industry R&D-department, performing applied research, like design of a second generation discus prosthesis or minimally invasive heart support devices.
Thanks to their broad scope and European view these students are also well prepared for tasks of product manager in an industry, leading an R&D-department of an industry, working as a project leader on applied research, medical physics engineer in a hospital. Their teamwork skills and knowledge of Biomedical Engineering make them suitable for hospital or clinical engineers who support and improve patient care by applying engineering and management skills to health-care technology. They are involved in technical support of daily practice, training of health care professionals, introducing safety programmes, etc.
The broad view on the various BME-fields, the capability in making judgements, integrating medical, cultural, social, ethical insights make them very well suited for functions in government/public health, consultancy in a wide spectrum of functions (from product design to safety regulations), notified bodies (screening new products for a CE-mark), health insurance, improving health care and controlling costs.

Programme mobility

A student can indicate, at which university to do the first two semesters (60 ECTS of basic course elements on BME), where to do the third semester (30 ECTS specialisation) and where to do the fourth semester (30 ECTS Master's project). At least two different universities have to be chosen, but every combination is possible. In this way, the student has a maximum freedom to create a Master's programme and to follow the preferred specialisation. For the final decision, local regulations at consortium member universities have to be followed.

Contact

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www.biomedicaltechnology.eu

UGent: Prof. Patrick Segers

International Master of Science in Biomedical Engineering

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: DOUBLE MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

To ensure quality of the programme the enrolment is limited to 20 students per consortium university. The consortium reserves at least 15 places for third-country students. The admission is granted to applicants who meet the following selection criteria:
A Bachelor in Engineering or equivalent.
The original of the transcript of records (or certified copy) or degree certificate. Applicants in the final year of their Bachelor's study may also apply. They should send in an updated version of their transcript of records. They will be accepted on the condition that they will have met with all requirements by the start of the programme in September.
Degree certificates, originating from other than the consortium universities, will be judged by the consortium secretariat that use lists of universities with a sufficient level of quality.
Academic excellence as is evident from the awarding institution of the first degree, the grades obtained and the content of two letters of reference.
Well-written and well-considered motivation letter to follow the programme.
Relevant work experience to follow the programme successfully as is made evident in a curriculum vitae.
A completed application form received, which includes besides the above mentioned documents, two passport-sized photos and a copy of the passport.

LANGUAGE
Sufficient English proficiency. Language requirements include an IELTS test score of 6.5 or a TOEFL test score of 580 (paper-based), 237 (computer-based) or 92 (internet-based iBT). Since language competence is an important element, all universities of the consortium offer during this programme English language courses to the CEMACUBE students.

PRACTICAL INFORMATION

APPLICATION DEADLINE
- 1st of May for EU-students
- 1st of January for non-EU-students

www.biomedicaltechnology.eu

ENROLLING INSTITUTION
University of Groningen (The Netherlands)

TUITION FEE
The consortium will handle two tuition fees:
- for EU-students € 4000 per year,
- for all students incoming from non-EU countries € 8000 per year.

These fees are irrespective of the universities in which they will actually be enrolled. The fee has to be paid to the secretariat of the consortium, located at the University of Groningen

SCHOLARSHIPS
- For non-EU students full scholarships are available. These scholarships cover all costs for a period of two year up to a maximum of € 48.000.
- For EU-students scholarships are available to contribute to the costs made during their stay at the second university up to a maximum of € 5.000 per semester.

START/END OF THE PROGRAMME
Two year programme
Start academic year: last week of September

Master of Textile Engineering

Organised jointly by different European universities

Course content

The Master of Textile Engineering is a two-year Master programme in the field of textile engineering. The programme was developed in the framework of and with full support of the Erasmus programme of the European Union.
The Master of Textile Engineering builds an international and highly advanced programme in which the latest developments in the textile field are incorporated. The programme aims at stemming the tide of the continuous lack of interest for textile education among young people. To this purpose, textile education is brought in a multidisciplinary way, and the strengths of the most renowned education specialists in the domain of textiles in Europe are brought together. The programme ensures that the demands of an industry continuously striving for technological innovation, creativity, quality and an excellent performing management are fulfilled.

Course structure

The programme of the Master of Textile Engineering is a full-time programme, lectured in English. All major European universities offering a textile degree participate in the programme. As such, the programme benefits from the strengths of the already existing textile programmes in Europe, and covers all modern areas related to textiles.
The programme is organized at different locations: the students spend one semester (four to six months) at different universities (i.e. host universities). Specialized lecturers can come as well from the host university as from another participating university. The last semester of the two-year programme is meant for the thesis at one of the participating universities (to be chosen by the student) under supervision of a tutor, possibly in co-operation with the industry.

Students who are admitted spend one year and a half (three semesters) in three geographically spread regions in Europe where they are taught by a large number of professors of the participating universities. Each lecturer passes on his or her specific knowledge in a course module covering one or two weeks.

Next to the traditional lecturing methods, active methods are used such as case studies, presentation of papers, practical work in laboratories etc. To link theory with practice, company visits in the host country are regularly organized

> Master dissertation

The master dissertation is a requirement for every candidate to obtain a master degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review part, a theoretical reflection and an original analysis of the topic.

Career perspectives

The degree Master of Textile Engineering can lead to different careers involving textile knowledge in the broadest sense of the word. Students obtain a thorough understanding of all aspects related to textiles and, as such, are prepared for jobs requiring elaborate knowledge in textiles. The jobs imply technical functions, R&D functions and (general) management functions.
Employment has an explicit international dimension which is also the consequence of the international and global character of the programme itself.

Contact

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http://textiles.UGent.be

Master of Textile Engineering

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Students having a higher education degree (BSc, BEng, etc.) in textiles or related areas.
For Flemish degrees:
the exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

LANGUAGE
The applicant must prove to have an advanced knowledge of the English language by providing:
- an official certificate which confirms that the applicant has successfully completed at least one year of a study programme of which the medium of instruction was English, either at an institute of Higher Education or a Secondary School;
- a recent TOEFL-TEST with a score of at least 550 (paper-based) or 79 (internet-based) - the UGent TOEFL code is 2643 - the test can be maximum two (2) years old;
- a certificate of the British Council (IELTS) with an overall band of 5,5;
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE
General deadlines:
- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION
Ghent University

TUITION FEE
- standard tuition fee for full-time programme (60 ECTS credits): € 567,80 reduced tuition fee for students from developing countries: € 80
  (this fee does not include expenses such as course books, excursions, travel expenses, etc.)

As this course is being organised at different universities consecutively, an extra fee is asked to organise this mobility.
For further information, please contact :
Paul.Kiekens@UGent.be

SCHOLARSHIPS
- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarship

START/END OF THE PROGRAMME
Two year programme
Start academic year: last week of September

MASTER (YEAR 1)

GENERAL COURSES	**60**
Automation and Process Control	3
Technical Textile Manufacturing Technology	6
Composites	3
Instrumental Analysis	3
Textile Composite Structures for Impact Protection	3
Applied Textile Process Engineering	3
Intelligent Textiles	3
High Technology Fibres	3
Application of Technical Textiles	3
High-Performance Fibres	3
Nanotechnology in the Textile Branch	3
Biomaterials	3
Biotechnology	3
Advanced and Specialised Textile Processing -Dyeing and Finishing	6
Functional Finishing	3
Medical, Transportation and Construction Textiles	3
Mechanics of Textile Materials	3
Innovative methods for the Product Development Process for Garments and Technical Applications in the Ready-Made Industry	3

MASTER (YEAR 2)

GENERAL COURSES	**30**
Recycling	3
Management, Logistics and Distribution	3
Advanced and Specialised Textile Processing - Mechanical	9
Supply Chain Management	3
Garment Technology	3
Ecological and Environmental Aspects	3
Quality and Environmental Management	3
Industrial Information Systems	3
MASTER DISSERTATION	**30**

Master of Nuclear Engineering

Organised jointly by Ghent University, Vrije Universiteit Brussel, Katholieke Universiteit Leuven, Université de Liège, Université Catholique de Louvain

Course content

Probably the most familiar nuclear engineering application is the production of electricity by means of nuclear power. Over 30 % of electricity in the EU and roughly 55 % in Belgium is provided by nuclear power. Moreover, at a small absolute but high relative scale, Belgium developed on its territory almost all kinds of nuclear activities: power plants, fuel production, radioelement production, engineering companies, accelerator design and fabrication, waste management, safety management, nuclear medicine, research and … higher education.
The Master of Nuclear Engineering is a one-year programme organized by major Belgian universities in collaboration with SCK•CEN, the Belgian Nuclear Research Centre. The programme is taught in English. Its high modularity allows optimal time management for teachers and students, it facilitates individual participation in selected courses e.g. advanced courses in the context of continuous professional development, and it also facilitates foreign students' participation in blocs of courses.
The Belgian Master of Nuclear Engineering programme is embedded in the European ENEN association, a non-profit international organisation of universities and research centres for the preservation and further development of higher nuclear education and expertise. The Belgian Master of Nuclear Engineering programme, where appropriate, collaborates with the ANENT, the Asian Network for Education in Nuclear Technology.

Course structure

The programme consists of a set of general courses followed by some elective advanced courses, an internship and a Master thesis work. The schedule of the programme will stimulate the students' mobility in the preparation of their Master thesis work: internship in industry, in research centres or in universities within Belgium or Europe. The lectures are taught at the premises of the Belgian nuclear research centre SCK•CEN. The laboratory exercises make use of the nuclear facilities of SCK•CEN. Various technical visits are organized to research and industrial nuclear facilities.

> Master dissertation

The master dissertation is a requirement for every candidate to obtain a master degree. The master dissertation is an original piece of research work. It aims to develop and strengthen the research capacity skills of the students. The student selects a topic and is given guidance by a promoter or supervisor. The master dissertation consists of a literature review part, a theoretical reflection and an original analysis of the topic.

Career perspectives

The objective of the Master of Nuclear Engineering is to offer present/future professionals and researchers a solid background in the different disciplines of nuclear engineering.

Contact

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T +32 (0)9 264 56 57

Belgium Nuclear Research Centre SCK•CEN
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www.sckcen.be/bne

Master of Nuclear Engineering

60 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Applicants must have obtained an academic degree after at least five years of study (Master of Science, Engineering or equivalent) in a discipline related to the content of the programme from a recognised University, College or Institute.

LANGUAGE
the applicant must prove to have an advanced knowledge of the English language by providing:
- an official certificate which confirms that the applicant has successfully completed at least one year of a study programme of which the medium of instruction was English, either at an institute of Higher Education or a Secondary School;
- a recent TOEFL-TEST with a score of at least 550 (paper-based) or 79 (internet-based) - the UGent TOEFL code is 2643 - the test can be maximum two (2) years old;
- a certificate of the British Council (IELTS) with an overall band of 5,5; (the test can be maximum two (2) years old);
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE
General deadlines:
- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION
Ghent University

TUITION FEE
- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS
- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships
Students can also receive a grant from BNEN (www.sckcen.be/bnen)

START/END OF THE PROGRAMME
One year programme.
Start academic year: last week of September.

MASTER

GENERAL COURSES	**45**
Nuclear Energy: Introduction	3
Introduction to Nuclear Physics	3
Nuclear Materials I	3
Nuclear Fuel Cycle and Applied Radiochemistry	3
Nuclear Materials II	3
Nuclear Reactor Theory and Experiments	8
Nuclear Thermal-Hydraulics	6
Radiation Protection and Nuclear Measurements	6
Operation and Control	3
Reliability and Safety	3
Advanced Topics	4
MASTER DISSERTATION	**15**

Postgraduate Studies in Fire Safety Engineering

Course content

The fire safety engineer understands and applies fire safety engineering (FSE). According to ISO TR 13387-1, fire safety engineering is the application of engineering principles, rules and expert judgement based on a scientific appreciation of the fire phenomena, of the effects of fire and of the reaction and behaviour of people, in order to:

- save life, protect property and preserve the environment and heritage;
- quantify the hazards and risk of fire and its effects;
- evaluate analytically the optimum protective and preventative measures necessary to limit, within prescribed levels, the consequences of fire.

These objectives will be achieved by a variety of means including such activities as:

- the assessment of the hazards and risks of fire and its effects;
- the mitigation of potential fire damage by proper design, construction, arrangement, and use of buildings, materials, structures, industrial processes, transportation systems and similar;
- determining the appropriate level of evaluation for the optimum preventive and protective measures necessary to limit the consequences of fire;
- the design, installation, maintenance and/or development of fire detection, fire suppression, fire control and fire related communication systems and equipment;
- the direction and control of appropriate equipment and manpower in the strategy and function of firefighting and rescue operations;
- post-fire investigation and analysis, evaluation and feedback.

A fire engineer, by education, training and experience:

- understands the nature and characteristics of fire and the mechanisms of fire spread and the control of fire and the associated products of combustion;
- understands how fires originate, spread within and outside buildings/structures, and can be detected, controlled, and/or extinguished;
- is able to anticipate the behaviour of materials, structures, machines, apparatus, and processes as related to the protection of life, property and the environment from fire;
- has an understanding of the interactions and integration of fire safety systems and all other systems in buildings, industrial structures and similar facilities;
- is able to make use of all of the above and any other required knowledge to undertake the practice of fire engineering.

Course structure

Ten general courses – one out of three optional courses – dissertation.
Two-year part-time programme, 30 ECTS per year: the equivalent of a full academic year is taught over a period of two years (4 times 12 weeks). The courses are given on Thursday evening, Friday all day and exceptionally on Saturday morning. This allows professionals to participate.

> Dissertation

The student applies his/her knowledge of Fire Safety Engineering.

Career perspectives

Fire safety consultants, fire prevention officers, fire brigade officers, building designers, building services engineers, architectural practitioners.

Contact

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www.firw.ugent.be/onderwijs/> postgraduaatopleiding

Postgraduate Studies in Fire Safety Engineering

60 ECTS CREDITS ◆ PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: CERTIFICATE OF POSTGRADUATE STUDIES

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Target Group:
fire safety consultants; fire prevention officers, fire brigade officers, building designers, building services engineers, architectural practitioners
Academic qualifications:

- Holders of an academic engineering or architect diploma
- Others on the basis of a study of individual skills

LANGUAGE

At enrolment for an English study programme you must give evidence of a good command of English by submitting one of the following:

- a TOEFL-TEST, maximum two years old, with a score of 510-559 (paper-based), or van 87-109 (internet-based) or higher (the UGent TOEFL code is 2643);
- an original 'test report form' (TRF) from IELTS, maximum two years old, with a minimum score of 6.0;
- a certificate awarded by the UCT confirming proficiency in English (minimum CEF-level B2);
- certificate of practical English 5, Upper-intermediate Academic English, or Preparing for an English Test, awarded by the UCT (University Language Centre).

Under no circumstances will a student be enrolled, if they cannot demonstrate English proficiency by one of the above.

The following students are exempted from the language requirement:

- holders of a diploma of secondary education or higher education, awarded by an (recognised) institution in the Flemish Community;
- students who have successfully completed a minimum of 1 year (60 credits), be it secondary or higher education, where the medium of instruction was English (an official certificate must be submitted);
- students who have successfully completed a predoctoral training programme at Ghent University, provided that the majority of the programme were course units in English.

PRACTICAL INFORMATION

APPLICATION DEADLINE

General deadlines:

- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION

Ghent University

TUITION FEE

€ 8000 for the full course, manuals not included

SCHOLARSHIPS

- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME

One year programme.
Start academic year: last week of September.

STUDYPROGRAMME

GENERAL COURSES	**39/45**
Fluid Mechanics Applications in Fire	3
Fire Dynamics	6
Fire Safety Regulation	3
Industrial Fire Protection and Explosions	3
Interaction between People and Fire	3
Passive Fire Protection	6
Active Fire Protection I:	
Detection and Suppression	3
Active Fire Protection II:	
Smoke and Heat Control	3
Performance-based Design	6
Risk Management	3
DISSERTATION	**15**
Thermodynamics, Heat and Mass Transfer (1)	6
Steel and Concrete Structures (2)	6

(1) and (2) are alternative courses to be chosen depending on the attendant's personal knowledge at the onset of the programme

Master of Science of Nutrition and Rural Development

MAIN SUBJECTS: HUMAN NUTRITION • RURAL ECONOMICS AND MANAGEMENT • TROPICAL AGRICULTURE
International Course Programme (ICP): Master Programme organised by Ghent University and the Flemish Interuniversity Council (VLIR-UOS)

Course content

Food security and sustainable development of rural areas require specialists with an integrated and multidimensional view on development problems. They should be able to elaborate, implement and evaluate strategies and policies, adapted to the specific needs and possibilities of developing countries.
The Master of Science of Nutrition and Rural Development will form specialists in this field.
The programme provides a choice among three main subjects, to be specified at the first registration:

- Human Nutrition (HuNu);
- Rural Economics and Management (REM);
- Tropical Agriculture (Major Animal Production or Plant Production) (TAAP/TAPP).

The common part of the programme consists of modules providing basic knowledge, theoretical insights and methodological skills in the areas of production, transformation, preservation, marketing and consumption aspects of food production, nutrition and marketing. Further, students are trained in quantitative and qualitative research methods for the identification and assessment of nutrition and food security problems, the ranking of underlying factors and the elaboration and evaluation of appropriate interventions.
Furthermore, the programme develops written and oral communication skills and management capacities. The students are further trained in independent research and interdisciplinary teamwork. Finally, the students obtain a specific expertise, depending on their main subject.

> HUMAN NUTRITION (HUNU)

The objective is to transfer specific and profound knowledge, insights and skills related to food security and nutrition problems and solutions at population level.
Therefore, this subject focuses on subject areas such as food chemistry, food science, nutritional requirements, food and nutrition policy, nutrition surveillance, nutrition practices, nutrition research, and food safety, all referring to the nutrition problems in developing countries.

> RURAL ECONOMICS AND MANAGEMENT (REM)

The objective is to give students specific expertise on the socio-economic mechanisms causing failure and success of in rural development, and to provide them with adequate tools for the planning and implementation of sustainable, integrated rural development strategies and interventions. To achieve this, students receive in-depth knowledge about agronomic, environmental, economic, social, financial, institutional and policy aspects of food production systems, the functioning of food markets and the impact of agricultural policies and rural institutions on the development of rural areas.

> TROPICAL AGRICULTURE (TA)

Wishes to deliver technical knowledge related to agriculture focussing on developing countries. The students can specialize in animal production or plant production by choosing the specific major. The major on Animal Production delivers in-depth knowledge on production biology, animal nutrition, pasture management, animal genetics … The major on Plant Production focuses on themes like ethnobotany, crop protection, plant breeding, plant biotechnology … The courses are applicative, and aim at presenting solutions for agricultural problems in developing countries in an interdisciplinary way.

Course structure

Students should choose the main subject they want to follow (including the major if applicable) the moment they apply for inscription at UGent. In the first year of the MSc programme 30 ECTS credits are commonly taught. These courses are giving in-depth knowledge and know-how in some more general courses related to nutrition and rural development, in order to achieve a common base level between all programme students of different backgrounds. The second part of courses given during the first year are mainly specific courses for each of the three main subjects, but aiming at achieving a more specific but broad common base for the students of each specific main subject. The second year of this MSc programme provides a more in-depth understanding of the specific problems and their solutions for the main subject they have chosen. The second year therefore consists of specific courses on each main subject chosen, optional courses and Master Dissertation research. For the optional courses the student may choose among the specific courses of the other main subjects, or he/ she can propose other courses offered in English at UGent as long as they enable the student to compile a tailor-made study curriculum enhancing his/her individual needs or interests.

> Master dissertation

It is highly recommended that students return to their home country or another developing country to do the data collection or field research. A local co-promoter (nominated by the staff of the programme) will assist them during that period.

Career perspectives

> FOR OVERSEAS STUDENTS:

- Research and teaching at universities, private or governmental;
- Research in research institutes, private or governmental;
- Development project collaborators;
- Independent consultants;
- Policy preparation;
- Administration of rural projects;
- …

> FOR EUROPEAN STUDENTS:

- Overseas project collaborators for local and overseas governmental and local or international, non-governmental development organisations in the domains taught in the study programme;
- Consultancy overseas after some years of experience;
- Involved in Europe in some non-governmental organisations, active in the development cooperation field;
- In administration as policy preparatory jobs;
- In rural development research and project preparation.

Master of Science of Nutrition and Rural Development

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER OF SCIENCE

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Each application will be evaluated by a board of admission of the specific programme and has to be approved by the Faculty Council and by the Rector's office.
Entry conditions:
Applicants must have a Bachelor's degree of minimum 3 years with good overall scores (at least a second class or equivalent, preferably higher) from a university or recognized equivalent.
Specific academic requirements:
Applicants for the main subject Human Nutrition are expected to have a basic science training (demonstrable in the transcripts) in the following fields: (1) mathematics and physics and/or statistics, (2) (bio)chemistry and 3) biology and/or physiology. Relevant research or working experience of minimum 2 years is recommended but not a prerequisite unless the former field of study (and/or degree obtained) was not directly relevant.
Applicants for the main subject Rural Economics and Management are expected to have a basic science training (demonstrable in the transcripts) in the following fields: (1) mathematics and/or statistics, (2) agronomy and/or biology and/or environmental sciences and (3) social sciences and/or rural development.
Applicants for the main subject Tropical Agriculture are expected to have a basic science training (demonstrable in the transcripts) in the following fields: (1) mathematics and/or statistics, (2) agronomy (3) (bio)chemistry and (4) depending of the chosen major: for Animal Production: animal biology and physiology and for Plant Production: a basic knowledge about plant diseases and pests and/or good background in plant biology is an advantage but not a requisite.

LANGUAGE
The applicant must be proficient in the language of the course or training programme, i.e. English. Command of the English language is a very important criterion for admission. With the exception of those who have a diploma (Secondary Education, Academic Bachelor Degree, Master Degree) issued by an institution officially recognized by the Flemish Government, applicants must be able to prove their proficiency in English. There are four possibilities to supply this proof:

- TOEFL certificate (the UGent TOEFL code is 2643) with:
  a minimum total score of 550 on the paper based test, or
  a minimum total score of 79 on an internet based test (the test validity is max. 2 years);
- IELTS with a minimum overall band score of 6 (the test validity is max. 2 years);
- Proof of at least 1 year of comprehensive English-based instruction at a university or recognized equivalent;
- Proof of a successful "Intermediate Academic English" test at the Ghent University Language Center.

(Remark: TOEFL/IELTS predictive tests are not acceptable.)

PRACTICAL INFORMATION

APPLICATION DEADLINE

- For students applying for a VLIR-UOS scholarship:1st of February
- For students who require a visa: 1st of May
- For students who do not require a visa:before September 1

www.icp-itp.UGent.be

ENROLLING INSTITUTION
Ghent University

TUITION FEE

- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS

- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME
Two year programme.
Start: first Monday of the last week of September.
End: last Friday of the second week of September.

Contact

Ghent University
Master of Science of Nutrition and Rural Development
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nurude@UGent.be
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Master of Science of Nutrition and Rural Development

MASTER (YEAR 1)

GENERAL COURSES	**30**
Applied Statistics	5
Human Nutrition	5
Tropical Food Production	5
Human Development Economics	5
Planning and Project Design	7
Seminars in Nutrition and Rural Development	3
OPTIONAL COURSES	**30**
HUMAN NUTRITION	
Food Chemistry	5
Food Marketing and Consumer Behaviour	5
Post-Harvest Handling, Processing and Preservation	5
Food Safety	4
Nutrition Disorders	6
Functional Foods	5
RURAL ECONOMICS AND MANAGEMENT	
Food Marketing and Consumer Behaviour	5
Rural Development and Poverty	5
Agricultural and Rural Policy	5
Farm Management and micro-economic theory	5
Agricultural Economics of Developing Countries	5
Agricultural Sociology and Extension	5
TROPICAL AGRICULTURE	
Tropical Animal Production	4
Tropical Crop Production	4
MAJOR TROPICAL PLANT PRODUCTION	
Ethnobotany and New Crop Development	4
Molecular Techniques	3
Plant Biotechnology	5
Tropical Crop Protection	5
Plant Breeding	5
MAJOR TROPICAL ANIMAL PRODUCTION	
Applied Animal Genetics	5
Animal Production Biology	5
Animal Nutrition	5
Meat and Meat Products	4
Tropical Pasture Management	3

MASTER (YEAR 2)

OPTIONAL COURSES	**20**
HUMAN NUTRITION	
Food and Nutrition Interventions	5
Food and Nutrition Policies	5
Food and Nutrition Epidemiology	5
Community Health Promotion	5
RURAL ECONOMICS AND MANAGEMENT	
Economics and Management of Natural Resources	5
Rural Project Management	5
Advanced Marketing and Agribusiness Management	5
Applied Rural Economic Research Methods	5
TROPICAL AGRICULTURE	
Rural Development and Poverty	5
MAJOR TROPICAL PLANT PRODUCTION	
Post-Harvest Handling, Processing and Preservation	5
Properties and Management of Soils of the Tropics	5
Tropical Forestry	5
MAJOR TROPICAL ANIMAL PRODUCTION	
Milk and Dairy Technology	4
Sustainable Animal Husbandry	6
Animal Disease Control and Veterinary Epidemiology	5
ELECTIVE COURSES	**10**
to be chosen from all specific courses taught in the other main subjects of the MSc. Nutrition and Rural Development or in other MSc. programmes taught in English at the Ghent University	
MASTER DISSERTATION	**30**

PREPARATORY COURSE

Courses for min. 10 and max. 60 ECTS credits, selected from the courses in the Bachelor programmes of the Faculty of Bioscience Engineering, depending on the pre-educational background of the student

International Master of Science in Rural Development

International Master Programma jointly offered by Ghent University and partners of European Erasmus Mundus programmes and EU-Atlantis programmes

Organising institutes

By forming a Network of Institutes of Excellence the International MSc in Rural Development builds on excellent competencies in the area of Rural Development, strong links with the professional world and extensive experience in joint training programmes for foreign students.
The main EU partners of the joint IMRD are:
- Ghent University (Belgium),
- Agrocampus Ouest (France),
- Humboldt University of Berlin (Germany),
- University of Cordoba (Spain),
- Wageningen University (Netherlands),
- Slovak University of Agriculture in Nitra (Slovakia),
- University of Pisa (Italy).

Apart from this collaborations have been set up with an extended network of third country partner institutes in the United States, China and other non-EU countries for course work, case studies, Internships and Master Thesis research projects. For a detailed list and the specialty disciplines of the partner institutes, consult the website.

Course content

IMRD brings together scholars from leading universities and research institutes worldwide to expose students to different existing paradigms, visions, approaches and practices for the development of rural areas. This offers the opportunity **to compare the European vision on Rural Development with others, to research EU and non-EU Agricultural and Rural Development Policies and to experience the diversity of approaches and applications for the development of rural areas.**

The International MSc in Rural Development provides students with:
- Awareness of the multifunctional role of rural areas and agriculture and an integrated vision on development of rural areas
- Knowledge of different approaches to Rural Development and ability to apply these in diverse situations in developing, developed and transition countries
- Ability to apply adequate instruments, methods and innovative tools to analyse, evaluate and solve problems related to Agricultural Policy, Food Systems, Rural Development and Countryside Management
- Ability to develop innovative tools and instruments for the multifunctional development of rural areas
- A general formation in both technical and social sciences disciplines and advanced competence in at least two Rural Development related disciplines
- Ability to dialogue with different actors of the socio-professional world as a consequence of their pluri-disciplinary training
- Critical reflection skills and the necessary communication skills for integrated team work for dealing with Rural Development challenges.

Course structure and mobility

The methodology consists of a combination of **Basic and Specialised** training in technical, economic and social sciences, divided over three study periods, a **Case Study** of one month in the summer period and an individual **Master Thesis** research project in the fourth study period. The programme includes a high extent of student and scholar mobility, making it possible to learn from specialists within and outside of Europe. Non-European students would study mainly in the European Union, European students have opportunities to study within and outside of the EU.

Each 2-year programme consists of one **Basic Module** (one semester), two **Specialised Training Modules** (two semesters), a **Case Study** or **Internship** in the summer period and a final semester dedicated to the **Master Thesis** research and writing.
The Basic and Specialised Modules offer training in Agricultural Economics; Rural Economics and Management; Institutional and Resource Economics; Sustainable Territorial Approaches to Rural Development; Sustainable Agriculture and Rural Sociology.
An absolute condition to obtain the Master degree is to fulfill the **mobility requirements** of the programme, i.e. to study in at least 2 of the Partner Institutes and to participate in the Case Study or Internship. The course programme and mobility schedules can be consulted on the website **www.imrd.UGent.be**.
The IMRD has a policy of equal distribution among partners offering courses in the same period.

The IMRD is supported amongst others by the European Erasmus Mundus and EU-Atlantis programmes. Students can obtain the IMRD degree through **different tracks**, available to different categories of students.
The **Erasmus Mundus track**, focusing on the European perspective on Rural Development is offered to European and non-European students. This track is part of the EU Erasmus Mundus scholarship programme.
The **Atlantis track**, allowing comparative analysis of EU and US Rural Development and agricultural economic problems and policies, is offered to European and US students and is part of the EU-Atlantis scholarship programme.
The **IMRD – national track** allows combining a national degree with an exchange period within the IMRD consortium and is offered to European and non-European students who want to have a deep knowledge of rural development in one specific European country as opposed to a general vision.

> Master dissertation

The master dissertation aims to develop and strengthen the research capacity skills of the students. Therefore students are recommended to select a topic related to a rural development problem of their country. The master dissertation typically consists of a literature review part, a theoretical reflection on the problem and an original analysis of the problem based on empirical data.

Contact

Ghent University – IMRD – ATLANTIS secretariat
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www.IMRD.UGent.be
www.TRANSATLANTIS.UGent.be

International Master of Science in Rural Development

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER OF SCIENCE

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Each application will be evaluated by a board of admission of the specific programme and has to be approved by the Faculty Council and by the Rector's office.

Entry conditions:

Applicants must have a Bachelor's degree of minimum 3 years with good overall scores (at least a second class or equivalent, preferably higher) from a university or recognized equivalent.

Specific academic requirements:

Applicants are expected to have basic science training (demonstrable in the transcripts) in the following fields: (1) mathematics and/or statistics, (2) agronomy and/or biology and/or environmental sciences and (3) social sciences and/or rural development. Applicants who cannot present a combined training of these fields will be evaluated on their aptitude, based on experience and knowledge of these fields, as demonstrated by CV or other evidence.

LANGUAGE

The applicant must be proficient in the language of the course or training programme, i.e. English. Command of the English language is a very important criterion for admission. With the exception of those who have a diploma (Secondary Education, Academic Bachelor Degree, Master Degree) issued by an institution officially recognized by the Flemish Government, applicants must be able to prove their proficiency in English. There are four possibilities to supply this proof:

- TOEFL certificate (the UGent TOEFL code is 2643) with:
  a minimum total score of 550 on the paper based test, or
  a minimum total score of 79 on an internet based test (the test validity is max. 2 years);
- IELTS with a minimum overall band score of 6 (the test validity is max. 2 years);
- Proof of at least 1 year of comprehensive English-based instruction at a university or recognized equivalent;
- Proof of a successful "Intermediate Academic English" test at the Ghent University Language Center.
  (Remark: TOEFL/IELTS predictive tests are not acceptable.).

PRACTICAL INFORMATION

APPLICATION DEADLINE

- for foreign students applying for scholarship: normally December 31, unless otherwise mentioned on the IMRD website
- for other categories: see IMRD and ATLANTIS websites www.IMRD.UGent.be

ENROLLING INSTITUTION

Students enrol in Ghent University in the months preceding the start of the academic year. The tuition fee is paid to the IMRD account in Ghent University, which grants the student access to each of the partner institutes. Students register in each of the host institutes at arrival.

TUITION FEE

Min 2,000 and max 4,000 EUR per academic year. Further, students should foresee extra money for course material (± 500 EUR per year), the participation in the case study (1,000 EUR), accommodation and subsistence (± 600 EUR per month) and for travelling between the host institutes.

SCHOLARSHIPS

Students can apply for Erasmus Mundus and Atlantis scholarships, provided by the European Union. Information on alternative funding possibilities can be found on the IMRD and ATLANTIS websites.

START/END OF THE PROGRAMME

Two year programme. Starts in Ghent University according to the academic calendar of UGent. Students are requested to be present approximately one week before the start of the courses.

MASTER (YEAR 1)

BASIC MODULE	**30**
SPECIALISED MODULE	**30**

Each of the modules can be extended with elective courses.

Applicants with skills in any of the national languages of the Consortium Partners are offered extended course options.

MASTER (YEAR 2)

CASE STUDY	**10**
SPECIALISED MODULE	**20**

Each of the modules can be extended with elective courses.
For detailed schedules and course lists, consult the website.

MASTER DISSERTATION	**30**

PREPARATORY COURSE

Courses for min. 10 and max. 60 ECTS credits, selected from the courses in the Bachelor programmes of the Faculty of Bioscience Engineering, depending on the pre-educational background of the student.

Master of Science of Aquaculture

International Course Programme (ICP): Master Programme organised by Ghent University and the Flemish Interuniversity Council (VLIR-UOS)

Course content

Today, aquaculture, in all its variant forms, accounts for around 40 % of the total aquatic food production and represents the fastest growing component in the world of food supply. Since the late 1970's, aquaculture expanded from an artisan, extensive mode of production of aquatic organisms to a rapidly evolving bio-industry. The European aquaculture sector can only maintain or acquire a leading position through technological and scientific leadership which calls for top quality education. Several individual European institutes are internationally recognized authorities in specific fields of expertise in Aquaculture and Fisheries. The increasing consumption of aquatic products in the European countries has drawn much attention to the development of a sustainable aquaculture and fishery sector. Declining fishery catches and changing consumer requirements for a diversified range of safe, high-quality farmed aquatic products has inevitably lead to regional and national specialisation in research as well as in education. Due to the diversity of aquaculture and fisheries, education in this sector calls for a multi-disciplinary approach.

Also in non-European countries (including 'Third Countries') the demand for aquatic animal products is rising, putting pressure on the natural resources. Hence in these countries the interest for aquaculture products is high (Far East, Africa) and is already the subject of a fast developing economic activity (Far East) or has the potential of becoming so (Africa). World statistics do indeed indicate that aquatic food is traded very intensively. It is estimated that 50 % of the total aquatic production is crossing national borders. The MSc Aquaculture calls upon the UGent and European aquaculture expertise to educate and train students and scholars from European and third countries in order to stimulate transfer of knowledge to and from Europe, nurturing in this way a sustainable development of aquaculture in these countries. Especially these developing countries have a high potential for a fast development of aquaculture, which enables them to support their food-protein requirements and/or gain foreign currency by exporting highly priced seafood. This evolution, however, is based on developments in food technology, species selection, zoo-technical aspects, mana-gement, automation, disease control etc. It is accepted that the lack of well-trained specialists may be the bottleneck for the further expansion of aquaculture.

The Laboratory of Aquaculture & Artemia Reference Center of the Ghent University, Belgium has a long-standing worldwide reputation in the field of education and training in aquaculture.

The Master of Science of Aquaculture deals with the most important aspects of aquaculture, of both marine and fresh-water organisms. It aims at delivering academic masters who:

- are able to perform and design research in various aquaculture fields;
- are experts that can draw and implement strategies for future development in the aquaculture industry;
- as key persons, can act as a nucleus in their local environment through dissemination and teaching their acquired knowledge;
- are academically trained staff for the aquaculture industry.

Course structure

The Master of Science of Aquaculture is a two-year programme at a university level on the most important aspects of aquaculture for both marine and freshwater organisms.
In the first semester, basic knowledge such as biology, physiology, microbiology, statistics, informatics are broadened/refreshed. The second semester of the first year focuses on specific aspects in aquaculture such as larviculture and larval food production, fish and shellfish production techniques, algae culture, farm management training, hygiene & disease control management techniques etc. The whole first semester of the second year, students follow specialised courses on health management, genetics and management at Ghent University, in combination with 15 ECTS credits of elective courses.

Ghent University alone can not master all the new knowledge in all disciplines supporting successful aquaculture production. Therefore, an international consortium MAqFish was started in 2003. The 7 partner universities have proven individually their ability to maintain a leading position in selected aspects of aquaculture and fisheries. Together the consortium provides students with a broad coverage of the most up-to-date knowledge and techniques. The curriculum of the Master of Science of Aquaculture is adapted to the possibility to follow specialised courses and perform thesis work at one of the seven members of the MAqFish consortium. Next to that, the opportunity exists to carry out the thesis work in developing countries. The many courses offered by all partners can also be chosen and taken as optional course during the third or fourth semester, including internships and project work.

> Master dissertation

Through the master dissertation the student is expected to prove that he/she is able to (i) tackle a problem from the very beginning, (ii) develop a research programme, (iii) analyse and comment on results, (iv) integrate the acquired data and the conclusions with previous knowledge of the subject, and (v) present a scientific report clearly and concisely. In view of these objectives, it is clear that the student has to demonstrate his/her abilities to work independently.

The topics deal with either fundamental or applied research. Supervisors aim at suggesting or accepting original research. Originality may be associated with the approach, the subject, the method, etc. The master dissertation is always developed under the supervision of one of the lecturers (also assisted by scientific and technical staff from his/her lab).

The style of the written master dissertation is that of scientific papers. The master dissertation is written in English and fits a specific structure (including a summary in Dutch). The master dissertation is defended in public. Each student is allocated a presentation time of 10 minutes. This is followed by a discussion with the jury members of about 15 minutes. The student uses a PowerPoint presentation that he/she has composed and should be understandable by his/her peers. Following the actual presentation, the student is questioned on the content of the written document

Master of Science of Aquaculture

and on the presentation. With these questions the members of the examination committee assess the capacity of the student to integrate the knowledge acquired during the programme and his/her ability to answer challenging questions/comments..

Career perspectives

Aquaculture is a diverse and dynamic industry. It depends on knowledge from a series of disparate disciplines (e.g. biology, engineering, marketing), and it is constantly evolving, drawing on new technologies and the outputs of a range of R&D activities. Consequently, there is a need of highly trained and skilled personnel with specific but varying skills in order to be able to exploit existing aquaculture potentials in a profitable and sustainable way. The European Union estimates the demand for trained personnel in the aquaculture industry to be 8,000-10,000 in 2010 (COM 511 Statement to the Sustainable Development of European Aquaculture, Sept 19.2002). Europe therefore needs to educate and train these aquaculture specialists at European universities. Europe also needs to educate and train students and scholars from third countries in order to stimulate transfer of knowledge to and from Europe.

Contact

Ghent University
Laboratory of Aquaculture & Artemia Reference Center
Course Promotor: Prof. dr. ir. Peter Bossier
Course Coordinator: ir. Bart Van Delsen
Course Administrator: Mr. Sebastiaan Vanopstal
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www.icp-itp.UGent.be

Master of Science of Aquaculture

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER OF SCIENCE

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Each application will be evaluated by a board of admission of the specific programme and has to be approved by the Faculty Council and by the Rector's office.

Entry conditions:
Applicants must have a Bachelor's degree of minimum 3 years with good overall scores (at least a second class or equivalent, preferably higher) from a university or recognized equivalent.

Specific academic requirements:
Applicants are expected to have basic science training (demonstrable in the transcripts) in at least 5 out of 7 of the following fields:
(1) mathematics, including basic statistics, (2) physics, (3) chemistry, (4) biochemistry, (5) biology, (6) microbiology, (7) engineering.
Some background in aquaculture is recommended.

LANGUAGE
The applicant must be proficient in the language of the course or training programme, i.e. English. Command of the English language is a very important criterion for admission. With the exception of those who have a diploma (Secondary Education, Academic Bachelor Degree, Master Degree) issued by an institution officially recognized by the Flemish Government, applicants must be able to prove their proficiency in English. There are four possibilities to supply this proof:

- TOEFL certificate (the UGent TOEFL code is 2643) with:
  a minimum total score of 550 on the paper based test, or
  a minimum total score of 79 on an internet based test (the test validity is max. 2 years);
- IELTS with a minimum overall band score of 6 (the test validity is max. 2 years);
- Proof of at least 1 year of comprehensive English-based instruction at a university or recognized equivalent;
- Proof of a successful "Intermediate Academic English" test at the Ghent University Language Center.
  (Remark: TOEFL/IELTS predictive tests are not acceptable.).

(failing to meet these language criteria results in the inability to register at Ghent University and means you will be sent back home)

PRACTICAL INFORMATION

APPLICATION DEADLINE

- For students applying for a VLIR-UOS scholarship:1st of February
- For students who require a visa: 1st of May
- For students who do not require a visa:before September 1

www.icp-itp.UGent.be

ENROLLING INSTITUTION
Ghent University

TUITION FEE

- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80 (this fee does not include expenses such as course books, excursions, travel expenses, etc.) (+ ca. € 200 to € 600 can be charged for international excursions)

SCHOLARSHIPS

- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)
  see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME
Two year programme.
Start: first Monday of the last week of September
End: last Friday of the second week of September

Master of Science of Aquaculture

MASTER (YEAR 1)	
GENERAL COURSES	**60**
Aquatic Ecology	5
Biology of Aquatic Organisms	4
Fish Culture Techniques	6
General Aspects of Aquaculture	4
Microbial Ecology and Environmental Sanitation	4
Physiology of Aquatic Organisms	3
Technology of Fishery Products	3
Algae Culture	3
Aquatic Farm Management Training	5
Mollusc and Crustacean Culture	7
Aquaculture and the Environment	5
Larviculture and Larval Food Production	6
Applied Statistics	5

MASTER (YEAR 2)	
GENERAL COURSES	**15**
Management in the Aquaculture Industry	5
Aquaculture Genetics	5
Diseases in Aquaculture	5
OPTIONAL COURSES	**15**
From a list of courses from the partners of the European Master in Aquaculture and Fisheries (National University of Ireland, Cork, Ireland; Wageningen Universiteit & Research Centre, The Netherlands; Universidade do Algarve, Portugal; Universitetet i Bergen, Norway; Norges Teknisk- Naturvitenskapelige Universitet, Norway; Uniwersytet Warminsko - Mazurski w Olsztynie, Poland), or from the UGent list below. Subject to motivation max. 5 ECTS credits can be chosen from all programmes of UGent.	
Food Marketing and Consumer Behaviour	4
Human Nutrition	5
Marine and Lacustrine Biology	4
Biodiversity of Marine and Lacustrine Micro-organisms	6
Natural Systems for (Waste)water Treatment	3
Agricultural Sociology and Extension	5
Economics and Management of Natural Resources	5
Irrigation and Drainage	5
Coastal Systems	6
Farm Management	5
Human Development Economics	5
Lacustrine Systems	6
Functional Foods	5
Agricultural Economics of Developing Countries	5
Rural Project Management	5
Project	5
Work Placement	5
MASTER DISSERTATION	**30**

PREPARATORY COURSE
Courses for min. 10 and max. 60 ECTS credits, selected from the courses in the Bachelor Programmes of the Faculty of Bioscience Engineering, depending on the pre-educational background of the student.

Master of Science of Food Technology

MAJORS: FOOD SCIENCE AND TECHNOLOGY • POSTHARVEST AND FOOD PRESERVATION ENGINEERING
International Course Programme (ICP): Master Programme organised by Ghent University and the Flemish Interuniversity Council (VLIR-UOS)
Organised jointly by Ghent University and Katholieke Universiteit Leuven

Course content

The general objective of IUPFOOD is to provide a multidisciplinary and specialised professional training in areas of food technology, with emphasis on postharvest and food preservation engineering on the one hand and food science and technology on the other hand, to equip future personnel with the necessary technological and managerial knowledge, skills, and attitudes, which are required to successfully contribute to solving problems related to food security. The IUPFOOD programme particularly focuses on developing countries where food security (delivering enough nutritious, high-quality safe food) is a current and future major concern and key challenge.
Today it is recognised that post-production considerations or activities such as postharvest handling, storage, processing, preservation, marketing, distribution and utilizations need to form part of agricultural development programmes because there are many opportunities for food to be lost between harvest and consumption. These postharvest food losses represent a loss of valuable nutrients and money, especially in developing countries. Food should not only be produced, it should also be delivered to the ultimate consumer in an acceptable form if it is to fulfil its nutritional destiny. To bring foods to the consumer in an acceptable form, on the one hand processing technologies are used to convert edible raw materials into foods with decreased inherent stability; on the other hand preservation technologies are required to increase the stability and shelf life of foods.
Based on these considerations, two technological dimensions of prime and crucial importance in food processing and preservation are the key objectives and programme options in IUPFOOD:

- The transformation (processing) of raw materials into products suited for human consumption
- The role of postharvest and food preservation unit operations in delivering safe and nutritious foods to the end consumer

These two concerns are directly translated in the focus points of the IUPFOOD training programme.

Course structure

The programme builds on the integrated expertise in research and education of K.U.Leuven and UGent in the field of food technology. IUPFOOD offers two years of academic education, leading to a MSc degree 'Master of Science of Food Technology'. In the first year of the MSc programme, in-depth knowledge in food science, engineering and food engineering is obtained, in order to achieve a common base level between students of different backgrounds. The first year is common to all participants. The first semester is organised at UGent while the second semester is organised at K.U.Leuven. The second year of the MSc programme provides a broad knowledge in food technology and in-depth understanding in either 'Postharvest or Food Preservation Engineering' (PFPE) or 'Food Science and Technology' (FST), depending on the major chosen.
The second year of the programme therefore consists of specific courses on each major (PFPE and FST), optional courses and dissertation research. The major, the optional courses and the dissertation topic are chosen after completing the first year.

For the optional courses the student may choose among the courses of the other specialisation and the additional optional courses offered. This enables the participants to compile a tailor-made study curriculum according to their individual needs and interests. The specialisation 'Food Science and Technology' (FST) is organised at UGent, while the specialisation 'Postharvest and Food Preservation Engineering' (PFPE) is organised at K.U.Leuven.

> Master dissertation

The master dissertation integrates the acquired knowledge with the personal education/development of the student and is programmed in the third and fourth semester. It represents an important study load (30 ECTS) because it is considered to be an outstanding example of guided self-tuition in the Master programme, an integration of all aims and objectives of the Master programme and an instrument for evaluation of the end terms of the Master programme. The master dissertation represents a considerable volume of experimental work, analytical processing, interpretation and communication and is performed within a research group in K.U.Leuven or UGent.

Career perspectives

It is the objective of IUPFOOD to offer a programme that takes into account the specific needs and approaches in developing countries. The IUPFOOD programme prepares students for different tasks, particularly in a professional teaching and research environment. IUPFOOD alumni are mainly active in the following sectors: academic institutes (as teaching and/or research staff), research institutes (as research staff), non governmental organisations (in different capacities), governmental institutes (e.g. in research programmes, quality surveillance programmes or national nutritional programmes) and private industry (in particular quality control related jobs).
A number of IUPFOOD alumni complete further PhD studies in an early phase of their career.

Contact

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www.iupfood.be; www.icp-itp.UGent.be

Master of Science of Food Technology

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER OF SCIENCE

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Each application will be evaluated by a board of admission of the specific programme and has to be approved by the Faculty Council and by the Rector's office.

Entry conditions:

Applicants must have a Bachelor's degree of minimum 3 years with good overall scores (at least a second class or equivalent, preferably higher) from a university or recognized equivalent.

Specific academic requirements:

Applicants are expected to have basic science training (Bachelor of Science degree, demonstrable in the transcripts) in at least 3 out of 4 of the following fields: (1) mathematics, statistics and physics, (2) chemistry and biochemistry, (3) biology and microbiology and (4) engineering and food engineering, with an end result of minimum second class upper or equivalent.

LANGUAGE

The applicant must be proficient in the language of the course or training programme, i.e. English. Command of the English language is a very important criterion for admission. With the exception of those who have a diploma (Secondary Education, Academic Bachelor Degree, Master Degree) issued by an institution officially recognized by the Flemish Government, applicants must be able to prove their proficiency in English. There are four possibilities to supply this proof:

- TOEFL certificate (the UGent TOEFL code is 2643) with:
  a minimum total score of 550 on the paper based test, or
  a minimum total score of 79 on an internet based test (the test validity is max. 2 years);
- IELTS with a minimum overall band score of 6 (the test validity is max. 2 years);
- Proof of at least 1 year of comprehensive English-based instruction at a university or recognized equivalent;
- Proof of a successful "Intermediate Academic English" test at the Ghent University Language Center.
  (Remark: TOEFL/IELTS predictive tests are not acceptable.).

PRACTICAL INFORMATION

APPLICATION DEADLINE

- For students applying for a VLIR-UOS scholarship:1st of February
- For students who require a visa: 1st of May
- For students who do not require a visa:before September 1

www.icp-itp.UGent.be

ENROLLING INSTITUTION

Alternating: Ghent University and K.U. Leuven

TUITION FEE

- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS

- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME

Two year programme.
Start: first Monday of the last week of September
End: last Friday of the second week of September

Master of Science of Food Technology

MASTER (YEAR 1)

GENERAL COURSES	**60**
IN-DEPTH EDUCATION IN 'FOOD SCIENCE'	
Biochemistry and Physiology of Perishable Crops **	4
Food Chemistry and Analysis *	7
Food Marketing and Consumer Behaviour *	4
Food Microbiology and Analysis *	7
Nutrition and Dietetics**	4
IN-DEPTH EDUCATION IN 'ENGINEERING AND FOOD ENGINEERING'	
Applied Statistics *	5
Engineering Properties and Principles of Food Machinery **	7
Food Processing *	7
Thermal Processing of Foods **	8
Transport Phenomena and Engineering Kinetics **	7

* at UGent, ** at K.U.Leuven

MASTER (YEAR 2)

CLUSTERS	**18**
MAJOR FOOD SCIENCE AND TECHNOLOGY	
3 mandatory courses + 1 FST-course:	
Statistical Topics in Food Technology *	4
Food Colloids *	5
Functional Foods *	5
Milk and Dairy Technology (FST) *	4
Technology of Fishery Products (FST) *	4
Plant Based Food Products and Ingredients (FST) *	4
Meat and Meat Products (FST) *	4
MAJOR POSTHARVEST AND FOOD PRESERVATION ENGINEERING	
3 mandatory courses + 1 PFPE-course:	
Low Temperature Processing of Foods **	5
Mathematical Planning and Advanced Statistics **	4
Design and Management of Storage and Distribution Structures **	5
HACCP-Concepts and Quality Assurance: Workshop (PFPE) **	4
Postharvest Pest Management and Disease Control (PFPE) **	4
Food Packaging and Transportation (PFPE) **	4
ELECTIVE COURSES	**12**
From the major courses or from the list below:	
Food Toxicology *	4
Fruit and Vegetable Technology **	4
Cereal Science and Technology **	4
Food Fermentations *	4
Food Regulation: Workshop *	4
Workshop Food Technology * **	4
Management and Marketing in the Agrifood Sector**	5
Advanced Marketing and Agribusiness Management*	5
MASTER DISSERTATION	**30**

* at UGent, ** at K.U.Leuven

PREPARATORY COURSE

Courses for min. 10 and max. 60 ECTS credits, selected from the courses in the Bachelor Programmes of the Faculty of Bioscience Engineering, depending on the pre-educational background of the student.

Master of Science of Environmental Sanitation

MAJORS: SOIL • WATER • AIR

International Course Programme (ICP): Master Programme organised by Ghent University and the Flemish Interuniversity Council (VLIR-UOS)

Course content

The general objective of the study programme is the education of environmental specialists with ample knowledge of:
- the concepts and issues associated with environmental pollution;
- the detection and quantification of environmental pollution;
- the possible impact of environmental pollutants on the ecosystems and biota, together with the current techniques for risk assessment;
- the available technologies for prevention and remediation of environmental pollution and the way they are designed and applied in practice.

The ICP 'Environmental Sanitation' has been set up with the explicit aim to offer training to an international audience, and is therefore entirely taught in English. Although the study programme can be attended by all students interested in environmental problems in an international context, the programme has always focussed on specific situations, cases and issues in developing countries, thus contributing to an improvement of the quality of life in these countries. This international dimension is an important asset, as the frequent contacts and common activities enhance the students' social skills.

The vast majority of students are non-European. They mainly originate from Asia, Africa and, to a lesser extent, from Latin America. Because of its international reputation, also students from OECD countries, Central and Eastern Europe occasionally register for the programme.

Course structure

The study programme is structured around the following topics:
- basic study of non-polluted environments;
- sources and causes of environmental pollution;
- methodologies for detection and analysis of environmental pollution;
- environmental toxicology and risk assessment, both in the eco-toxicological and human toxicological field;
- prevention and sanitation of environmental pollution;
- clean technology;
- treatment of waste.

During the second year, the student has to choose a major ('soil', 'water' or 'air') to which the master dissertation research (30 ECTS credits) has to be linked. Each major consist of 3 courses corresponding to 11 ECTS credits.

> Master dissertation

The dissertation subject is related to one of the 'majors' of the study programme and preferably deals with an environmental issue at the country of origin. Therefore students can make their own proposal. This is possible because of the fact that in the framework of the current scholarship programme, students with a VLIR-UDC scholarship get the chance to return to their home countries during the summer holidays. During that period they have the opportunity to collect data and possibly also samples (e.g. dust on filters, water or soil samples; reducing the sample volumes by concentrating sample extracts is also possible) in the framework of their dissertation research. For those students who do not have the possibility to make their own proposal, each year potential dissertation promoters put forward dissertation subjects, which are announced by the CES in April. As such, the student can contact the professor in charge of the dissertation subject of his/her interest.

Career perspectives

Graduates of the ICP 'Environmental Sanitation' are active in diverse sectors and assume highly varying professional duties. This can vary from appointments in ministries and governmental services, NGOs, teaching assignments at universities or scientific research in domains that deal with technologies for prevention and sanitation of environmental pollution.
In view of this situation, the study programme pays particular attention to the acquisition of knowledge and skills that enables graduates with a Master degree to fulfil their role as leading scientists able to cope with all kinds of situations. Therefore, the ICP 'Environmental Sanitation' puts strong emphasis on reflection and analytical abilities, intellectual creativity, communication skills and the development of a research approach and problem-solving capacity.
Students must be able to apply the acquired knowledge and understandings in complex problems or situations with the necessary guidance and steering, taking into consideration the ethical, financial and social aspects.

Contact

Ghent University
Centre for Environmental Sanitation
Jozef Plateaustraat 22, B-9000 Gent
www.cms.UGent.be
www.icp-itp.UGent.be

Master of Science of Environmental Sanitation

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER OF SCIENCE

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Each application will be evaluated by a board of admission of the specific programme and has to be approved by the Faculty Council and by the Rector's office.
Entry conditions:
Applicants must have a Bachelor's degree of minimum 3 years with good overall scores (at least a second class or equivalent, preferably higher) from a university or recognized equivalent.
Specific academic requirements:
Applicants must have at least a bachelor's degree in exact or applied sciences. Adequate knowledge of mathematics, physics and chemistry at university level is an absolute requirement. Previous knowledge of biology, microbiology and/or soil science is an advantage but not a requisite.

LANGUAGE
The applicant must be proficient in the language of the course or training programme, i.e. English. Command of the English language is a very important criterion for admission. With the exception of those who have a diploma (Secondary Education, Academic Bachelor Degree, Master Degree) issued by an institution officially recognized by the Flemish Government, applicants must be able to prove their proficiency in English. There are four possibilities to supply this proof:
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- IELTS with a minimum overall band score of 6 (the test validity is max. 2 years);
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PRACTICAL INFORMATION

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- For students who require a visa: 1st of May
- For students who do not require a visa:before September 1

www.icp-itp.UGent.be

ENROLLING INSTITUTION
Ghent University

TUITION FEE
- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS
- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME
Two year programme.
Start: first Monday of the last week of September
End: last Friday of the second week of September

Master of Science of Environmental Sanitation

MASTER (YEAR 1)

GENERAL COURSES	**54**
Environmental Ecology	7
Environmental Chemistry	7
Biological Monitoring of Aquatic Systems	4
Environmental Microbiology	4
Ecological Risk Assessment	4
Human Toxicology related to the Environment	3
Analysis and Abatement of Air and Water Pollution	7
Environmental Soil Science	7
Biosolids and Solid Waste Treatment	6
Applied Statistics	5
ELECTIVE COURSES	**6**
from the list below or from other English Master programmes of Ghent University	
MODULE MANAGEMENT	
Management of Natural Resources	3
Environmental Economics and Policy	3
Environmental Legislation	3
MODULE HUMAN HEALTH	
Environmental Virology and Parasitology	3
Environmental Noise	3
Basic Concepts in Public Health and Epidemiology	3
MODULE ADVANCED TECHNOLOGIES	
Microbial Re-use Technology	6
Membrane Processes in Environmental Technology	3
MODULE RELATED COURSES	
Environmental Impact of Global Change	3
Environmental Impact of Pesticides	3
Life Cycle Assessment	3
Environmental Ethics	3
Plant-Water Relations in the Soil-Plant- Atmosphere Continuum	3
Soil Water Management	3
Land Information Systems	3
Aquaculture Environmental Impact	3

MASTER (YEAR 2)

GENERAL COURSES	**13**
Biotechnological Processes of Environmental Sanitation	5
Clean Technology	3
Environmental Impact Assessment: Integrated Project	5
CLUSTERS	**11**
For min. 11 ECTS credits from one major	
MAJOR AIR	
Chemistry of the Global Atmosphere	3
Advanced Waste Gas Treatment	3
Urban and Indoor Air Pollution	5
MAJOR SOIL	
Soil Degradation	5
Soil Remediation	3
Contaminant Transport in Soils	3
MAJOR WATER	
Quality of Groundwater Resources	5
Water Quality Management	3
Natural Systems for (Waste)Water Treatment	3
ELECTIVE COURSES	**6**
For min. 6 ECTS credits from the list of elective courses offered in Ma 1 or from other English Master programmes of Ghent University	
MASTER DISSERTATION	**30**

PREPARATORY COURSE

Courses for min. 10 and max. 60 ECTS credits, selected from the courses in the Bachelor Programmes of the Faculty of Bioscience Engineering, depending on the pre-educational background of the student.

Master of Science of Physical Land Resources

MAIN SUBJECTS: SOIL SCIENCE • LAND RESOURCES ENGINEERING

International Course Programme (ICP): Master Programme organised by Ghent University and the Flemish Interuniversity Council (VLIR-UOS)

Organised jointly by Ghent University (Faculty of Sciences/Faculty of Bioscience Engineering) and Vrije Universiteit Brussel (VUB) (Faculty of Applied Sciences)

Course content

The overall objective of the programme in Physical Land Resources is that graduates gain expertise to critically reflect on and give answers to questions like:

- What is soil?
- From what did the soil originate and how will it further develop under different conditions?
- Which factors and properties determine the suitability of soil for either agricultural or non-agricultural purposes and how can this be assessed?
- How can soil be improved for specific uses?
- How can degradation and desertification problems be tackled?
- How do we manage the soil and land capital and how do we protect it?
- What is the impact of the factor soil on the dynamics of natural ecosystems and how can this knowledge be used for nature conservation?
- What does soil learn us about environmental problems?
- How can we improve soil water management for sustainable crop production?
- How can we improve the efficient use of our scarce water resources?

Soils are a main determinant of ecosystems and as such are an essential cornerstone of human life and prosperity. Increasing population pressure and grave erosion, pollution and desertification issues are threatening this natural resource – already a scarce commodity in many countries – resulting in competition between agricultural and industrial purposes, urban planning and nature conservation. To guarantee a sustainable use and management of this 'basic commodity', each country requires trained specialists with an in-depth knowledge of the properties and characteristics of Physical Land Resources, with a due understanding of the factors and interventions capable of maintaining or changing the status and value of these natural resources.
This programme addresses cases relevant for soil scientists in general, in and outside Europe, and has a focus on tropical and arid regions.

Course structure

The programme curriculum includes general courses that provide the polyvalent scientific knowledge and insight, techniques and skills that are fundamental for a graduate in Physical Land Resources, regardless of the major that is chosen. These courses – all compulsory – form the common core for all the students taking the Master programme of Physical Land Resources and are scheduled in the first year, mainly in the first semester. The overall contents of the programme evolve from more general and guided subjects, towards more specialised topics and autonomous work in the second semester of the first year. The second year offers specialised in-depth training with specific accents/features within either Soil Science or Land Resources Engineering during the first semester, while the second semester is reserved for the research work of the Master dissertation.

> MAIN SUBJECT: SOIL SCIENCE

The courses in Soil Science provide the specialised knowledge and skills that are needed for all authorities who are concerned with a favourable destination of land. This major has a strong focus on agricultural use and applications and aims at training researchers, academics, government staff and expert consultants in the inventory and detailed characterization of land capacity and of soils in particular. Graduates acquire the knowledge and skills to understand the development and evolution of soils under natural conditions or following human interference using field, map, laboratory and remote sensing data. They have the scientific knowledge to use and manage soil and water in a sustainable way, and to optimize land use under different natural and environmental conditions.

> MAIN SUBJECT: LAND RESOURCES ENGINEERING

The major in Land Resources Engineering offers training in non-agricultural use and application of soil, and includes geotechnical aspects (use of soil as a building material or for foundations, slope stability and stability of excavations), the role of soil- and groundwater for water management and supply, soil management in relation to environment and land use (erosion, sediment transport, coastal development and protection).

> Master dissertation

Students are encouraged to tackle a topic relevant for their home country (and employing institution), if possible with data/samples collected locally. The Master dissertation research accounts for 30 credits, and as such represents an important part of the MSc Programme. The fourth semester of the programme is fully reserved for this research work. The student has to integrate the acquired knowledge with (guided) self study and involves experimental work, (data) analysis and interpretation, writing and communication. The Master dissertation is an important measure of the final competences obtained by the student, and as such also of the degree to which the programme reaches its objectives. The master dissertation has to be defended orally before a jury and an audience of peers.

Career perspectives

The graduates have the competence to be active in both basic and applied research at universities, research institutes and other government institutions and non-governmental organisations, and to apply their knowledge and skills as required by the overall development policy of their country. In particular:

- graduates have the basics to conduct field work (soil survey, soil profile description, soil classification), use existing cartographic and remote sensing data, and interpret analysed data. This is the basis for regional planning, land evaluation, land degradation risk assessment, etc. This regards all staff from (government) institutions and universities involved in the inventory of natural resources (pedologic and geologic survey and cartography).
- graduates are trained to characterize soil physically, chemically and mineralogically with advanced techniques, to translate this into soil quality and to assess the influence by and on natural and anthropogenic factors. This is important for staff active in laboratories for research in soil science, geomorphology and surface geology, attached to nature reserves and research institutes, and for academics.

Graduates from Belgium and Europe are trained to look at their profession from a situation that is different from their home situation, and are well placed for work in development co-operation projects, both because of the international scope of the course contents and through the interaction with colleague students of many different, mostly non-European nationalities.

Master of Science of Physical Land Resources

120 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: MASTER OF SCIENCE

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Each application will be evaluated by a board of admission of the specific programme and has to be approved by the Faculty Council and by the Rector's office.

Entry conditions:

Applicants must have a Bachelor's degree of minimum 3 years with good overall scores (at least a second class or equivalent, preferably higher) from a university or recognized equivalent.

Specific academic requirements:

Applicants are expected to have a basic science training in (1) mathematics or statistics and (2) chemistry or biochemistry, and an overall academic education background in a relevant discipline like (either) agriculture, biology, forestry, environment, land and water management, physical geography, geology or civil engineering. Relevant research or working experience of about 2 years is recommended but not a prerequisite, unless the former field of study (degree obtained) was not directly relevant for or pertaining to soil science or land resources engineering.

LANGUAGE

The applicant must be proficient in the language of the course or training programme, i.e. English. Command of the English language is a very important criterion for admission. With the exception of those who have a diploma (Secondary Education, Academic Bachelor Degree, Master Degree) issued by an institution officially recognized by the Flemish Government, applicants must be able to prove their proficiency in English. There are four possibilities to supply this proof:

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PRACTICAL INFORMATION

APPLICATION DEADLINE

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www.icp-itp.UGent.be

ENROLLING INSTITUTION

Ghent University and Vrije Universiteit Brussel (VUB)

TUITION FEE

- standard tuition fee for full-time programme (60 ECTS credits): € 567,80
- reduced tuition fee for students from developing countries: € 80

(this fee does not include expenses such as course books, excursions, travel expenses, etc.)

SCHOLARSHIPS

- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME

Two year programme.
Start: first Monday of the last week of September
End: last Friday of the second week of September

Master of Science of Physical Land Resources

MASTER (YEAR 1)

GENERAL COURSES	**45**
Pedology	5
Applied Statistics	5
Meteorology and Climatology	5
Soil Chemistry	5
Soil Physics	5
Soil Mineralogy	5
Land Information Systems	5
Soil Prospection and Classification	5
Seminars in PLR	5
OPTIONAL COURSES	**15**
SOIL SCIENCE	
Geomorphology	5
Plant-Water Relations in the Soil-Plant-Atmosphere Continuum	5
Soil Genesis	5
LAND RESOURCES ENGINEERING	
Geomechanics	5
Environmental Geology	5
Applied Geophysics	5

MASTER (YEAR 2)

SOIL SCIENCE

GENERAL COURSES	**20**
Soil Fertility	5
Soil Degradation	5
Land Evaluation	5
Soil Water Management	5
OPTIONAL COURSES	**10**
To be chosen (at least one course from the list below, the other course can be selected from Master programmes of the Ghent University):	
Remote Sensing	5
Properties and Management of Soils in the Tropics	5
Quality of Groundwater Resources	5
Irrigation and Drainage	5
Soil Erosion Processes and Control	5

LAND RESOURCES ENGINEERING

GENERAL COURSES	**30**
Applied Geochemistry	5
Applied Geomorphology	5
Geological Aspects of Geotechnical Engineering	5
Earth Observation Techniques	5
Soil Mechanics and Soil Stabilisation Techniques	5
Hydrogeology	5
MASTER DISSERTATION	**30**

PREPARATORY COURSE

Min. 3 and max. 60 ECTS credits, to be composed of courses from the Bachelor in Bioscience Engineering, option Land and Forest Management, or the Bachelor in Geology, depending on the student's previous degree.

Contact

Ghent University
Physical Land Resources
Krijgslaan 281/S8, 9000 Gent
www.plr.UGent.be
www.icp-itp.UGent.be/ICP/PLR.htm
PLRprog.adm@UGent.be

Postgraduate Studies in Technology for Integrated Water Management

Organised jointly by University of Antwerp and Ghent University • Partner institution: Antwerp Maritime Academy

Course Content

The general objective of the study programme is to train specialists in water technology who have knowledge of and insight in integrated water management and policy, trends and developments in the water sector, worldwide water problems and new techniques for water treatment and water purification. The study enables graduates to adequately apply water technology for the analysis and solution of water problems.

Course structure

The study programme consists of 3 parts and 11 modules (or course units) offering the student a certain freedom of choice. The curriculum is composed of an introductory part (part 1), an in-depth specialisation (part 2) and an integrating part (part 3) including a dissertation.

The introduction (part 1) contains introductory notions and concepts.
Specialisation takes place in the next part (part 2) consisting of 7 modules. Out of the package of available modules, the student composes a self-selected study package until a total of 18 credits is reached. The composition of this module 2 is illustrated by means of three possible tracks related to three groups of water users, but in principle, it is determined by the student's individual choice.
The integration (part 3) is made up of an integrated course and a dissertation including a individual research project, which allows for a further deepening of the subject .

Course Programme

> PART 1: INTRODUCTION

Compulsory;
organised during the first 3 weeks of the academic year

Module 1	Global water problems and integrated water management	3
Module 2	Integrated assessment of water and sediment quality	6

> PART 2: SPECIALISATION IN WATER TECHNOLOGY

Compulsory; subject to the steering group's approval: course units to a total amount of 18 credits: they are to be selected from the list mentioned below. On motivated demand max. 1 course for max. 5 credits can be chosen from the study programmes of the partner institutes.

Module 3	Wastewater treatment technology	6
Module 4	Sludge & Sediment management & treatment	3
Module 5	Ecological engineering	3
Module 6	Sustainable use of water: winning, distribution, use and reuse	3
Module 7	River morphology & hydrodynamics	3
Module 8	Water and shipping	6
Module 9	Integrated Water Management, Case River 21	3

Possible tracks:
- Specialisation for industrial water users: M3, M6
- Specialisation for nautical water users: M4, M7, M8
- Specialisation for ecological water users: M3, M4, M5

> PART 3: INTEGRATION IN WATER TECHNOLOGY & MANAGEMENT

Compulsory;

Module 10	Integrated modeling and design of basin management plans	3
Module 11	Dissertation	30

Contact

Ghent University
Centre for Environmental Sanitation
Jozef Plateaustraat 22, B-9000 Gent
info.cms@ugent.be
www.watertechnology.be

Postgraduate Studies in Technology for Integrated Water Management

60 ECTS CREDITS ◆ FULL-TIME OR PART-TIME ◆ LANGUAGE: ENGLISH ◆ DEGREE: CERTIFICATE OF POSTGRADUATE STUDIES

ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Each application will be evaluated by a board of admission of the specific programme and has to be approved by the Faculty Council and by the Rector's office.
Entry conditions:
Applicants must have a Bachelor's degree of minimum 3 years with good overall scores (at least a second class or equivalent, preferably higher) from a university or recognized equivalent.
Specific academic requirements:
Applicants must have at least a bachelor's degree in exact or applied sciences. Adequate knowledge of mathematics, physics and chemistry at university level is an absolute requirement. Previous knowledge of biology, microbiology and/or soil science is an advantage but not a requisite.
For Flemish degrees:
The exhaustive list of degrees giving access to this programme can be consulted in the online course catalogue.

LANGUAGE
The applicant must be proficient in the language of the course or training programme, i.e. English. Command of the English language is a very important criterion for admission. With the exception of those who have a diploma (Secondary Education, Academic Bachelor Degree, Master Degree) issued by an institution officially recognized by the Flemish Government, applicants must be able to prove their proficiency in English. There are four possibilities to supply this proof:
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(Remark: TOEFL/IELTS predictive tests are not acceptable.).

PRACTICAL INFORMATION

APPLICATION DEADLINE
General application deadlines:
- for students who need a visa: 1st of March
- for students who do not need a visa: 1st of June

ENROLLING INSTITUTION
Ghent University or University of Antwerp

TUITION FEE
Tuition fee for 2009-2010: € 61,80 + ECTS-credits x € 17,40
Fulltime registration (60 ECTS): € 1105,80

SCHOLARSHIPS
- offered by Ghent University for master studies: a limited number of scholarships awarded on a competitive basis
- Grants (Flemish Community; VLIR-UOS; Belgian Development Cooperation (DGDC); European Union; Other international organizations; your own government)

see: www.UGent.be > EN > education and study > study support > study related costs > scholarships

START/END OF THE PROGRAMME
One year programme
Start academic year: last week of September

UNIVERSITEIT GENT

Ghent University

Study Career Service
Adviescentrum voor Studenten
Sint-Pietersnieuwstraat 33
B-9000 Gent
internationalstudents@UGent.be
www.UGent.be > English
> Education and study > Study Support

ASSOCIATIE UNIVERSITEIT GENT