

International Masters and Postgraduate Courses at Ghent University

International Masters and Postgraduate Courses at Ghent University





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introduction

This brochure presents a compilation of the 23 international Masters of Ghent University (Belgium) and 4 English post-graduate courses.

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.

This brochure is merely an introduction and it is not possible to present a complete picture of the variety of masters on just a few pages. We therefore refer to the online up-to-date information:

- Information on the content of the programmes can be found in the online course catalogue of Ghent University (www.UGent.be > prospective students > 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. Besides these programmes, within the framework of continuing education, there are also a limited number of English courses available (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).

For information and advice

Ghent University

Study Career Service

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Sint-Pietersplein 7, B-9000 Gent

internationalstudents@UGent.be

T +32 (0) 9 264 70 00 F + 32 (0)9 264 35 79

www.UGent.be > English > international students



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: <http://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.

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, Vrije Universiteit Brussel

60 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

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 Government; 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.

Admission requirements > diploma

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 years of full-time study.

Language requirements

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

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.

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.

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

Application/registration takes place at the University of Antwerp (UA), Belgium. Practical details are provided by the program coordinator. To be able to register applicants need to have sent in all necessary documents to the coordinator, have taken the on-site interview and writing test and have received a letter of acceptance from the coordinator. This procedure needs to be completed before the end of September.

Tuition fee

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

Scholarships

A limited number of scholarships for students from developing countries is available. More information can be found on www.ua.ac.be > English > Foreign Degree Students

Start/end of the programme

One year programme

Start academic year: last week of September

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GENERAL COURSES	40
The Contemporary American Economy	5
American Law and the American Legal System	5
American Government	5
American History: Colonization to the Cold War	5
Culture 1: Film Noir: A Hollywood Genre in Its Social Context	5
Culture 2: Segregated America, 1865-1965	5
Culture 3: New York City in Fiction, 1975-2000	5
Culture 4: The American Way of Religion	5
MASTER DISSERTATION	20

CONTACT

Registration takes place at the University of Antwerp (UA), either in person or in writing.
Ghent University Faculty of Arts and Philosophy - English Department
Prof. Gert Buelens
Rozier 44, 9000 Gent - Phone + 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
Phone + 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 - Phone + 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 Advanced Studies in Linguistics

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

Main subjects: COGNITIVE AND FUNCTIONAL LINGUISTICS • INTERDISCIPLINARY LINGUISTICS • MULTILINGUAL AND FOREIGN LANGUAGE LEARNING AND TEACHING • LINGUISTIC RESEARCH IN A COMPARATIVE PERSPECTIVE

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 background 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 thesis and of the intensive course work and/or apprenticeship in the 2nd semester). If only one background 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.

- Cognitive and Functional Analysis - Katholieke Universiteit Leuven
- Interdisciplinary Linguistics - University of Antwerp
- Linguistic Research in a Comparative Perspective - Ghent University
- Multilingual 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.

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.

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.

Admission requirements > diploma

- 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 requirements

- > General language requirements:
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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with

a score of at least 6.0 (the test can be maximum two (2) years old);

- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements:
each faculty may impose specific language requirements: see: www.UGent.be

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 admission fee for full-time programme (60 ECTS credits): 540 EUR
 - reduced tuition fee for students from developing countries : 80 EUR
- (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 – see: www.UGent.be > international students > international degree students > general information about grants:
<http://www.highereducation.be>
<http://www.studyinlanders.be>

Start/end of the programme

One year programme
Start academic year: last week of September

60 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

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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
Psycholinguistic Methods and Language Acquisition	6
Theory and Praxis of Discourse Analysis	6
Theory Formation in Synchronic and Diachronic Linguistics	6

CLUSTERS 24-30

Linguistic Research in a Comparative Perspective (UGent)

Two or three courses so that the curriculum amounts to 60 credits:

Diachronic Comparative Linguistics	6
Language Variation and Change	6
Contrastive Linguistics: Syntax and Lexicon	6
Contrastive Linguistics: Semantics and Pragmatics	6
Linguistic Research in a Comparative Perspective: intensive course	12

Cognitive and Functional Linguistics (KULeuven)

Two or three courses so that the curriculum amounts to 60 credits:

Comparison of Cognitive and Functional Theories, and their Position in the History of Grammar: Theory and Description	6
Text Linguistics	6
Lexical Semantics	6
Usage-based Approaches to Language Change	6
Cognitive and Functional Linguistics: intensive course and/or apprenticeship	12

Interdisciplinary Linguistics (UA)

Two or three courses so that the curriculum amounts to 60 credits:

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
Interdisciplinary Linguistics: intensive course and/or apprenticeship	12

courses may also be chosen from:
 Master in Artificial Intelligence and Advanced Master in Language and Speech Processing) 12

Multilingual and Foreign Language Learning and Teaching (VUB)

Two or three courses so that the curriculum amounts to 60 credits:

Approaches to Language Teaching and Learning for Multilingual Education	6
Applied Linguistics and Foreign Language Teaching	6
Language Contact and Language Planning	6
Multilingual and Foreign Language Learning and Teaching: intensive course and apprenticeship	12

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CONTACT

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



Erasmus Mundus: European Master in Law and Economics

60 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

the Erasmus Mundus Programme by the European Commission

The Erasmus Mundus programme is a co-operation and mobility programme in the field of higher education organised by the European Commission. It aims to enhance quality in European higher education and to promote intercultural understanding through co-operation with third countries.

The programme is intended to strengthen European co-operation and international links in higher education by supporting high-quality European Masters Courses, by enabling students and visiting scholars from around the world to engage in post-graduate study at European universities, as well as by encouraging the outgoing mobility of European students and scholars towards third countries.

The Erasmus Mundus Masters Courses constitute the central component around which Erasmus Mundus is built. They are high-quality integrated courses at master level offered by a consortium of at least three universities in at least three different European countries. The courses must be "integrated" to be selected under Erasmus Mundus, which means that they must foresee a study period in at least two of the three universities and that it must lead to the award of a recognised double, multiple or joint diploma.

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); Berkeley (USA); Madrid (Spain); Manchester (United Kingdom); Rotterdam (The Netherlands); Vienna (Austria).

course content

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. Because economic science has developed a framework of theorems and concepts which are universally applicable to human behaviour and human choice, economic theory constitutes a very useful international standard. Also law is concerned with the interaction of human action and the harmonisation of interests of individuals, groups and social classes. 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 of Laws in Law and Economics, in which a number of European universities participate, 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.

course structure

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.

The academic year is subdivided into three terms. Students spend each one of the three terms at another European university, to be chosen from a list.

career perspectives

This master programme is particularly interesting for students who are looking for an international career in a law firm, in consultancy, or in an international organization.



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.

Admission requirements > diploma

- For non-Flemish degrees: 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 requirements

- > General language requirements: 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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements: each faculty may impose specific language requirements: see: www.UGent.be

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

Enrolling institution

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

Tuition fee

- European students: 4500 EUR
- Non-European students: 8500 EUR

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).

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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, Madrid, Manchester, Rotterdam, Stockholm, Vienna

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CONTACT

Ghent University

Faculty of Law
Department of Jurisdiction and History of Law
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Universiteitstraat 4, 9000 Gent
T + 32 (0)9 264 68 07
Secretary: Nancy Van Nuffel
(nancy.vannuffel@UGent.be)
www.emle.org

Master of European Criminology and Criminal Justice Systems

60 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

course content

To a growing extent, crime phenomena have a European or international dimension. This is e.g. the case for street crime, hooliganism, drug tourism or drug trafficking, environmental crime, economic crime, tax fraud, organised crime or terrorism and also for the policy to prevent and control crime. In recent years, European countries, regions and cities have engaged themselves in treaties of co-operation aimed at the prevention and the control of certain crime phenomena. Police and judicial authorities need to work together. Different European institutions or co-operation levels (the Council of Europe, the European Union, the Benelux Economic Union, the Schengen group ...) emphasise in their activities the importance of fighting crime. Since the beginning of the nineties, several research groups from different European countries have carried out comparative research into crime phenomena and crime control.

Following these developments, Ghent University took the initiative to start, from the academic year 1999-2000, a specialised education programme in European Criminology and Criminal Justice Systems.

course structure

The aim of the special education programme is to gain a clear understanding of the quantitative, qualitative and contextual aspects of different crime phenomena with a European or international dimension. As criminology is a multidisciplinary discipline, the programme is not only directed at criminologists but also suited for lawyers, sociologists, political scientists, historians, communication scientists, pedagogues and psychologists. Next to this, the programme aims at knowledge and expertise in the organisation and the functioning of criminal justice systems in Europe and the European institutions engaged in penal policy. The programme also has the aim to introduce students in juridical and social scientific methodological skills taking into account international comparative research on crime phenomena and criminal policy of European countries.

Based on these comparative skills, the master programme finally develops a personal critical view on organised crime in Europe, European security and prevention policy and drug policy, European police models, private policing and security as well as penal systems in Europe.

In short, this Master in European Criminology and Criminal Justice Systems intends to expertise in and to develop a personal critical view on crime, prevention of crime and crime control in a European context.

career perspectives

There is a growing demand in different European countries on national, regional or urban level for university qualified experts in the European dimension of crime and crime control. Also in European research projects, there is an emphatic need for researchers with a special knowledge of European criminology and criminal justice systems.



Master dissertation

To receive the degree of Master in European Criminology and Criminal Justice Systems, students will have to write a dissertation of approximately 15,000 words. The topic of this dissertation should display a European relevance or a comparative study between at least two European countries.

A co-promoter of this dissertation may be a professor of one of the Socrates partner universities. The dissertation is written in English.

Admission requirements > diploma

Master of Law
 Master of Criminological sciences
 Master of Political Sciences
 Master of Sociology
 Master of Communication Sciences
 Master of Psychology
 Master of Educational Sciences
 Master of History
 Master of Social Work and Social Welfare Studies
 Holders of a Flemish or non-Flemish certificate, mentioned above, still need the permission of the Admission Committee before they will be accepted. As the target group of the Master is students with a critical opinion about society, the program is set up in such a way that students are taught about the institutions and the systems from a critical point of view and projected on its socio-economic and political background. To acquire a motivated group of participating students, we organise an entrance examination. The entrance test consists of writing a paper according to the following guidelines:

- *topic of the paper:*
 Which trends and developments have occurred in the nature and extent of violence in your country the last decade, according to you? In your opinion, did these trends also emerge in other European countries? How do you explain these trends? Which measures and initiatives would, according to you, be appropriate to counter these forms of "violence"?

- *guidelines for writing:*
 The paper should not exceed 4,000 words (with a minimum of 2,500 words). It is important to properly define the main concepts used in the paper. Full references should be given for each citation and each paraphrase, in a style that is consistent throughout the paper. Two main styles of references are encouraged: social science style, with e.g. (Järvinen, 1991) in the text and references at the end alphabetically by author; and legal style, with a superscript number in the text referring to a numbered footnote or endnote, and with references in the notes. Candidates send the paper no later than the middle of August to the Chairman of the Examining Board accompanied by a copy of their certificate and the motivation for applying to enter this programme.

The board will decide as soon as possible if the candidate has the suitable profile to start the Master Programme. Candidates can be invited for an interview with the Examining Board.

Language requirements

> General language requirements:
 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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements:
 each faculty may impose specific language requirements: see: www.UGent.be

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 admission fee for full-time programme (60 ECTS credits): 540 EUR
- reduced tuition fee for students from developing countries : 80 EUR

(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 – see: www.UGent.be > international students > international degree students
 > 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

MASTER

ECTS

GENERAL COURSES	29
European Criminology	8
European Criminal Justice Systems	8
European Institutions of Criminal Policy	7
Comparative Methodology	6
ELECTIVE COURSES	16
Security and Prevention Policy in Europe	4
Police Models in Europe	4
Penal Systems in Europe	4
Private Policing and Security in Europe	4
Drug Policy in Europe	4
Organized Crime in Europe	4
MASTER DISSERTATION	15

CONTACT

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 Faculty of Law
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 Tinneke Degraeuwe
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Chairman of the Admission Committee
 Prof. Dr. Patrick Hebberecht
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www.law.UGent.be/crim/mastercrim/index.html

Master of Advanced Studies in European and Comparative Law

60 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

course content

The Master of Advanced Studies in European and Comparative 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 all 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, including an introduction to an important non-European legal system. 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, Legal History, Law and Economics, and Comparative Law. Students can choose from approximately forty different courses, all of which are exclusively taught in English. Classes are limited in size and 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.

career perspectives

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

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.

Admission requirements > diploma

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 still 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 a case, the admission may be made subject to limitations with respect to the courses to be followed.

Language requirements

If your native language is not English, you must give evidence of a good knowledge of English, written and spoken, by presenting one of the following documents:

- a recent TOEFL-test with a score of at least 600 (paper based), 250 (computer based) or internet based (100)
- a recent IELTS test score with an overall band of 6.0
- a certificate of the Ghent University Language Centre

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

Tuition fee

Subject to approval by the university board of directors, 4245 EUR (+ personal costs e.g. study visits to European/international organisations)

Scholarships

> offered by Ghent University for master studies: a limited number of grants awarded on a competitive basis – see: www.UGent.be > international students > international degree students > general information about grants:

<http://www.highereducation.be>

<http://www.studyinlanders.be>

Start/end of the programme

One year programme

Start academic year: last week of September



MASTER

ECTS

GENERAL COURSES		9
Skills for Lawyers		3
European and Belgian Law: the Basics		3
The Art of Comparison		3
ELECTIVE COURSES		33
Two courses should be chosen that have a specific EU law orientation (reference a):		
EUROPEAN LAW		
European Institutional Law	a	5
Law of the Internal Market	a	5
The Legal Framework of International Trade:		
EC and WTO	a	5
Judicial Enforcement of EU Law	a	5
Human Rights in Europe		6
European and Comparative Discrimination Law	a	5
External Relations of the EU	a	5
EU Enlargement	a	3
Competition Law	a	5
European Public Procurement Law	a	5
PRIVATE LAW		
Principles of European Private Law		6
Comparative Tort Law		6
Comparative Contract Law		6
International and Comparative Civil Procedure in Europe		6
International Commercial Arbitration		3
ECONOMIC AND SOCIAL LAW		
Comparative and European Company Law	a	5
International Commercial Transactions		5
Comparative Private Banking Law		5
European Banking and Capital Market Law	a	6
International and European Labour and Employment Law	a	6
International and European Social Security Law	a	6
Comparative Intellectual Property Law		6
Transfrontier Aspects of Intellectual Property Rights and International Licensing Agreements		3
Comparative Corporate Governance		6
Legal Aspects of Mergers and Acquisitions		5
ENVIRONMENTAL LAW		
European and Comparative Environmental Law		5
International and European Biodiversity Law	a	5
Comparative Environmental Liability Law		5
International and European Environmental Law	a	6

TRANSPORT LAW		
Transport Law		6
Maritime Transport Law		6
Transport Insurance Law		5
INTERNATIONAL LAW		
Contemporary Issues of Public International Law		6
Law of the Sea		5
MEDIA LAW		
Comparative Media Law		5
INFORMATION TECHNOLOGY LAW		
Introduction to Information Technology Law		6
CRIMINAL LAW AND CRIMINOLOGY		
European Criminal Justice Systems		6
European Criminal Policy		6
Penal Systems in Europe		5
Organised Crime in Europe		5
Comparative Methodology in European Criminology		5
LAW AND ECONOMICS		
Economic Analysis of European Private Law		6
COMPARATIVE LAW		
Introduction to US Law		3
Selected Topics of International and Comparative Law		3
Selected Topics of EU and Comparative Law		3
Contemporary Issues in European and Comparative Law		3
SEMINAR		3
Foreign Chair		
MASTER DISSERTATION		15

CONTACT
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International Relations Officer Veronique Christophe phone +32 (0)9 264 67 76 veronique.christophe@UGent.be www.law.UGent.be/llm/

Master of Marketing Analysis

60 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

course content

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

This Master program started in October 1999. The program addresses the needs of companies for better-educated staff with strong skills in the domain of marketing analysis. 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

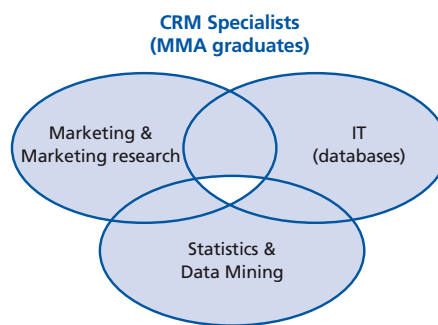
These people will be the interface between company management (e.g. product manager, marketing manager) and the suppliers of marketing data within the organisation. Currently, marketing departments are not facing the problem how to obtain marketing data, but rather how to transform these massive amounts of data into useful marketing information and systems.

More specifically, the focus of the program 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 four 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://mmmacrm.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/mma_projects.htm

Admission requirements > diploma

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 requirements

> General language requirements:

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); from 2009-2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an

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).

original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);

- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements:

each faculty may impose specific language requirements: see: www.UGent.be

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 admission fee for full-time programme (60 ECTS credits): 540 EUR
- reduced tuition fee for students from developing countries : 80 EUR

(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 – see: www.UGent.be > international students > international degree students

> general information about grants:

<http://www.highereducation.be>

<http://www.studyinlanders.be>

Start/end of the programme

One year programme

Start academic year: last week of September

MASTER

ECTS

GENERAL COURSES	21
Current Developments in Marketing	5
Reporting Techniques for Marketing Analysis	3
Marketing Information Systems/Database Marketing	5
Marketing Models and Marketing Engineering I	8
ELECTIVE COURSES	21
Marketing Models and Marketing Engineering II	7
Advanced Methods of Market Research I	7
Advanced Methods of Market Research II	7
Strategic Brand Communications	7
MASTER DISSERTATION	18

CONTACT

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Department of Marketing

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Mss Carole Picavet - Programme Secretary

T +32 (0)9 264 79 27 - mma@UGent.be

See also: www.mma.UGent.be



Master of Banking and Finance

60 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

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 quantitative 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.

career perspectives

The Master program 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
- ...

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.

Admission requirements > diploma

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. The target group consists of masters in economics, applied economics, commercial engineer with sufficient initial education in financial economics, investment analysis and econometrics.

Language requirements

> General language requirements: 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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);

- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements: each faculty may impose specific language requirements: see: www.UGent.be

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 admission fee for full-time programme (60 ECTS credits): 540 EUR
- reduced tuition fee for students from developing countries : 80 EUR

(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 – see: www.UGent.be > international students > international degree students > general information about grants: <http://www.highereducation.be> <http://www.studyinlanders.be>

Start/end of the programme

One year programme

Start academic year: last week of September

MASTER

ECTS

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 Organization of Financial Institutions	3
Topics in Advanced Corporate Finance	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

CONTACT

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Master of Nematology

Majors: NEMATOLOGY APPLIED TO AGRO-ECOSYSTEMS • NEMATOLOGY APPLIED TO NATURAL ECOSYSTEMS • NEMATODE SYSTEMATICS

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 insect pests. 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 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.

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.

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.

Admission requirements > diploma

- For non-Flemish degrees:
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 requirements

- > General language requirements:
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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);
 - a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.
- > Specific language requirements:
each faculty may impose specific language requirements: see: www.UGent.be

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 admission fee for full-time programme (60 ECTS credits): 540 EUR
 - reduced tuition fee for students from developing countries : 80 EUR
- (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 – see: www.UGent.be > international students > international degree students > general information about grants:
<http://www.highereducation.be>
<http://www.studyinlanders.be>

Start/end of the programme

Two year programme
Start academic year: last week of September



120 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

MASTER (year 1)

GENERAL COURSES	28
Nematode morphology	4
Nematode systematics and molecular phylogeny	4
General techniques in nematology	4
Molecular techniques in nematology	3
Data mining, processing and communication	3
General nematode biology and interactions	4
Statistics	3
Nematodes as model organisms	3
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
MAJOR 3: 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	6
ELECTIVE COURSES	5
1 or 2 courses to be chosen from the list of elective courses for Master of nematology or any other University programme.	

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 of elective courses for Master of nematology	
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

CONTACT

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 www.pinc.UGent.be

European Master of Science in Nematology

Majors: NEMATOTOLOGY APPLIED TO AGRO-ECOSYSTEMS • NEMATOTOLOGY APPLIED TO NATURAL ECOSYSTEMS

the Erasmus Mundus Programme by the European Commission

The Erasmus Mundus programme is a co-operation and mobility programme in the field of higher education organised by the European Commission. It aims to enhance quality in European higher education and to promote intercultural understanding through co-operation with third countries.

The programme is intended to strengthen European co-operation and international links in higher education by supporting high-quality European Masters Courses, by enabling students and visiting scholars from around the world to engage in post-graduate study at European universities, as well as by encouraging the outgoing mobility of European students and scholars towards third countries.

The Erasmus Mundus Masters Courses constitute the central component around which Erasmus Mundus is built. They are high-quality integrated courses at master's level offered by a consortium of at least three universities in at least three different European countries. The courses must be "integrated" to be selected under Erasmus Mundus, which means that they must foresee a study period in at least two of the three universities and that it must lead to the award of a recognised double, multiple or joint diploma.

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.

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 insect pests. 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.

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 multidisciplinary 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.

programme mobility

An element of mobility is an essential component of the course: students are required to spend at least one semester at a partner University other than Ghent University (partners: Bielefeld, Germany; Evora, Portugal; Ghent, Belgium; Jaén, Spain; Kiel, Germany; Leuven, Belgium; Wageningen, The Netherlands and the Scottish Crop Research Institute, UK)

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.



120 ECTS credits • Full-time or Part-time • Language: English • Degree: Joint Master

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.

Admission requirements > diploma

- For non-Flemish degrees:

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 requirements

> General language requirements:

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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements:

interest in the languages of the partner universities is recommended.

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

Enrolling institution

Ghent University

Tuition fee

- 7000 EUR (annually) for non-EU students and
- 3000 EUR (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

CONTACT

Ghent University - Universiteit Gent

Faculty of Sciences - Faculteit Wetenschappen

Prof. Maurice Moens

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Erasmus Mundus Master of Science in Marine Biodiversity and Conservation - EMBC

the Erasmus Mundus Programme by the European Commission

The Erasmus Mundus programme is a co-operation and mobility programme in the field of higher education organised by the European Commission. It aims to enhance quality in European higher education and to promote intercultural understanding through co-operation with third countries.

The programme is intended to strengthen European co-operation and international links in higher education by supporting high-quality European Masters Courses, by enabling students and visiting scholars from around the world to engage in post-graduate study at European universities, as well as by encouraging the outgoing mobility of European students and scholars towards third countries.

The Erasmus Mundus Masters Courses constitute the central component around which Erasmus Mundus is built. They are high-quality integrated courses at master's level offered by a consortium of at least three universities in at least three different European countries. The courses must be "integrated" to be selected under Erasmus Mundus, which means that they must foresee a study period in at least two of the three universities and that it must lead to the award of a recognised double, multiple or joint diploma.

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.

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.

course structure

The study programme is running for two academic years and is divided in three 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, snorkelling, 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.

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



120 ECTS credits • Full-time or Part-time • Language: English • Degree: Joint Master

EMBC Masters will be well trained to operate immediately within these policy environments. Most of them will use this Master as a basis for Ph.D. 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).

mobility

Student mobility is an integral part of the ERASMUS MUNDUS MSc programme. 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 Klaipėda (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 Klaipėda 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 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.

Admission requirements > diploma

- 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 requirements

- > General language requirements:
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); from

2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

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

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: March 1; EU-students: June 1

Enrolling institution

Ghent University

Tuition fee

- 7000 EUR (annually) for non-EU students and
- 3000 EUR (annually) for EU-students

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: last week of September

CONTACT

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Master of Statistical Data Analysis

60 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

course content

Increasing computer power and the professional need to extract objective information from observed data have led 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.

career perspectives

Students who successfully finish the master program 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.



MASTER

ECTS

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 4 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

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.

Admission requirements > diploma

- For non-Flemish degrees: 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 requirements

- > General language requirements: 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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements: each faculty may impose specific language requirements: see: www.UGent.be

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 admission fee for full-time programme (60 ECTS credits): 540 EUR
- reduced tuition fee for students from developing countries : 80 EUR (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 – see: www.UGent.be > international students > international degree students > general information about grants: <http://www.highereducation.be> <http://www.studyinlanders.be>

Start/end of the programme

One year programme
Start academic year: last week of September

CONTACT

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

Ghent University

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Erasmus Mundus Master of Science in Photonics

the Erasmus Mundus Programme by the European Commission

The Erasmus Mundus programme is a co-operation and mobility programme in the field of higher education organised by the European Commission. It aims to enhance quality in European higher education and to promote intercultural understanding through co-operation with third countries.

The programme is intended to strengthen European co-operation and international links in higher education by supporting high-quality European Masters Courses, by enabling students and visiting scholars from around the world to engage in post-graduate study at European universities, as well as by encouraging the outgoing mobility of European students and scholars towards third countries.

The Erasmus Mundus Masters Courses constitute the central component around which Erasmus Mundus is built. They are high-quality integrated courses at master level offered by a consortium of at least three universities in at least three different European countries. The courses must be "integrated" to be selected under Erasmus Mundus, which means that they must foresee a study period in at least two of the three universities and that it must lead to the award of a recognised double, multiple or joint diploma.

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 points), 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 three 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-photonics components in silicon, III-V semiconductors and polymers, femtosecond 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 two-year (120 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 five different universities offer thesis work in different particular sub-fields of photonics.

European students have the opportunity to spend three 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 (YEAR 1)

ECTS

GENERAL COURSES	
SCOTLAND	
Sem 1, University of St. Andrews	
Core Laser Physics	4
Advanced Laser Physics	4
Nonlinear Optics & Modulators	3
Business awareness workshop	2
Photonic Guiding	2
Photonic Crystals	2
Core Photonics Laboratory	3
Advanced Photonics Laboratory	4
Polymers and Liquid Crystal	(2,5)
Photonics in Biomedicine	(5)
Sem. 2, Heriot-Watt University	
Ultrafast Photonics	2
Fourier Optics	2
Optical Design	2
Semiconductor Physics	2
Material Growth and Fabrication	2
Semiconductor Devices	4
Optical Telecommunications	4
Optical Instrumentation and Sensors	2
Core Photonics Laboratory	3
Advanced Photonics Laboratory	5
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
Information searching and presentation techniques	3
Swedish language course	3
Summer course	3

BELGIUM

Sem. 1, Ghent University	
Dutch language course	4
Microphotonics	6
Optical materials	6
Mathematics in photonics	4
Lasers	4
Sem. 2, Vrije Universiteit Brussel	
Physics of technological processes	4
photonics laboratory	4
Sensors and Microsystem Electronics	6
Optical communication systems	6
Summer course	3
ELECTIVE COURSES	
Ghent University/Vrije Universiteit Brussel	
Courses to be chosen from:	
- 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	6
- Photonic Semiconductor Devices and technology	6
- Internship in Photonics	4
- Quantum Physics for Electronics and Photonics	5
- Advanced Photonics Laboratory	4
- Photonics	5
KTH Stockholm	
- Information searching	1,5
- Photonics Presentations	1,5
- Swedish 1, Elementary Level	7,5
- Swedish Society, Culture and Industry in Historical Perspective	6
- Laser Engineering	7,5
- Simulation of Semiconductor Devices	7,5
- Optical Measurement Techniques	6
- Molecular Electronics	7,5
- Internship in Photonics	4

MASTER (YEAR 2)

ECTS

GENERAL COURSES	
SCOTLAND	
Sem. 1 (week 1-6), Heriot Watt University	
Nano Physics	4
Nano Chemistry	4
Nano Science Primer	4
Project preparation	3
Sem. 1 (week 7-12), University of St. Andrews	
Nonlinear Optics & Modulators	3
Photonic Crystals	2
Advanced Photonics Laboratory	4
Project preparation	4
Business awareness Workshop	2
Contemporary Photonics	2
Sem. 2, Heriot-Watt University or St. Andrews	
MASTER DISSERTATION	30
SWEDEN	
Sem. 1, KTH Stockholm	
Photonics laboratory	4.5
Microwave engineering	7.5
Sem. 2, KTH Stockholm	
Advanced semiconductor materials	7.5
Optical networking	7.5
Sem. 1 and 2, KTH Stockholm	
Swedish language	3
MASTER DISSERTATION	30
BELGIUM (Ghent or Brussels)	
Dutch language course	4
Recent developments in photonics	4
MASTER DISSERTATION	30
ELECTIVE COURSES 8-12	
(see First Year Master)	

Erasmus Mundus Master of Science in Photonics

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.

Admission requirements > diploma

- For non-Flemish degrees:
a bachelor degree or recognized equivalent from an accredited institution (minimum 3 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 requirements

> General language requirements:

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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements:
each faculty may impose specific language requirements: see: www.UGent.be

Application deadline

- For non-EU students: January 15
- For EU-students: May 31

Enrolling institution

Ghent University

Tuition fee

- For non-EU students: 7,000 EUR (annually)
- For EU-students: 2,000 EUR (annually)

Scholarships available

- For non-EU students: Erasmus Mundus grants
- For EU-students: a mobility grant to study 3 months at one of our non-EU partners

Start/end of the programme

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

Two year programme

CONTACT

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European Master in Nuclear Fusion Science and Engineering Physics (Fusion-Ep)

120 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

the Erasmus Mundus Programme by the European Commission

The Erasmus Mundus programme is a co-operation and mobility programme in the field of higher education organised by the European Commission. It aims to enhance quality in European higher education and to promote intercultural understanding through co-operation with third countries. The programme is intended to strengthen European co-operation and international links in higher education by supporting high-quality European Masters Courses, by enabling students and visiting scholars from around the world to engage in post-graduate study at European universities, as well as by encouraging the outgoing mobility of European students and scholars towards third countries.

The Erasmus Mundus Masters Courses constitute the central component around which Erasmus Mundus is built. They are high-quality integrated courses at master level offered by a consortium of at least three universities in at least three different European countries. The courses must be "integrated" to be selected under Erasmus Mundus, which means that they must foresee a study period in at least two of the three universities and that it must lead to the award of a recognised double, multiple or joint diploma.

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 3 months in the second Master in one of the following institutes: UCLA, USA; University of Wisconsin-Madison, 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.

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).



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.

Admission requirements > diploma

- For non-Flemish degrees:
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 requirements

> General language requirements:

- 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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements:

each faculty may impose specific language requirements: see: www.UGent.be

Application deadline

- For non-European students: January 15
- For European students: June 15

Enrolling institution

Ghent University

Tuition fee

- For non-European students: 6,000 EUR
- For European students: 1,000 EUR

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

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European Master in Nuclear Fusion Science and Engineering Physics (Fusion-Ep)

MASTER (YEAR 1)

ECTS

GENERAL COURSES	45
GHENT UNIVERSITY (Belgium)	
<ul style="list-style-type: none"> - Dutch Language and Flemish Culture (+ MA2) - Applied Electromagnetism - Computational Solutions of Wave Problems - Atomic and Molecular Physics - Plasma Physics - Nuclear Instrumentation - Continuum Mechanics - Cross-Course Project 	
KUNGLIGA TEKNISKA HÖGSKOLAN (Sweden)	
<ul style="list-style-type: none"> - Swedish Society (+ MA2) - Electromagnetic Waves in Dispersive Media - Computational Physics - Atomic and Molecular Physics - Plasma Physics - Energy and Fusion Research - Mechanics of Continuous Media - Chaos and Self-organisation 	
MADRID (UNIVERSIDAD COMPLUTENSE DE MADRID, UNIVERSIDAD POLITÉCNICA DE MADRID, UNIVERSIDAD CARLOS III DE MADRID) (Spain)	
<ul style="list-style-type: none"> - Language and Culture: Spanish (Basic) and Technical English (Intermediate) (+ MA2) - Classical Electrodynamics - Computational Physics - Introductory Atomic and Molecular Physics - Plasma Physics - Experimental Techniques in Plasmas, Nuclear Physics and Materials - Fluid Dynamics - Laboratory Project: Experimental Techniques in Plasmas, Nuclear Physics and Materials 	
UNIVERSITÉ HENRI POINCARÉ, NANCY I (France)	
<ul style="list-style-type: none"> - Language and Culture: French + Technical English (Intermediate) (+ MA2) - Computational Physics - Atomic and Molecular Physics - Plasma Physics Basic Course - Instrumentation and Signal Processing - Mechanics of Continuous Media - Classical Electrodynamics, Waves, Antenna and Emission Processes - Lab Project 	
UNIVERSITÄT STUTTGART (Germany)	
<ul style="list-style-type: none"> - German for Foreigners Intensive Course (+ MA2) - Physics of Atoms and Nuclei - Molecular Physics - Simulation Methods in Physics I + II - Plasma Physics I + II - Advanced Physical Laboratory - Electrodynamics 	

ECTS

ELECTIVE COURSES	15
GHENT UNIVERSITY (Belgium)	
PREPARATORY COURSES	
<ul style="list-style-type: none"> - Statistical Physics - Quantum Mechanics II 	
PLASMA PHYSICS	
<ul style="list-style-type: none"> - Semiconductor Component Physics - Physical Chemistry - Plasma Technology and Fusion Technology 	
COMPUTATIONAL METHODS IN PHYSICS	
<ul style="list-style-type: none"> - Electromagnetism and Relativity Theory 	
INSTRUMENTATION AND RADIATION	
<ul style="list-style-type: none"> - Materials Observation Techniques - Photonics 	
KUNGLIGA TEKNISKA HÖGSKOLAN (Sweden)	
PLASMA PHYSICS	
<ul style="list-style-type: none"> - Plasma Physics Supplementary Course - Space Physics - Field Theory for Wave Guides - Electromagnetic Wave Propagation 	
COMPUTATIONAL METHODS IN PHYSICS	
<ul style="list-style-type: none"> - Mathematical Methods in Physics - Computational Physics, Additional Course 	
INSTRUMENTATION AND RADIATION	
<ul style="list-style-type: none"> - Physics at Accelerators - Radiation Detectors and Medical Imaging - Scattering of Electromagnetic Waves - Field Theory for Wave Guides 	
MADRID (UNIVERSIDAD COMPLUTENSE DE MADRID, UNIVERSIDAD POLITÉCNICA DE MADRID, UNIVERSIDAD CARLOS III DE MADRID) (Spain)	
PREPARATORY COURSES	
<ul style="list-style-type: none"> - Statistical Physics - Advanced Atomic and Molecular Physics - Materials Physics 	
UNIVERSITÉ HENRI POINCARÉ, NANCY I (France)	
PREPARATORY COURSES	
<ul style="list-style-type: none"> - Mathematical Methods for Physicists - Statistical Physics - Quantum Physics - Thermodynamics and Introduction to Statistical Physics - Non-Equilibrium Systems and Transport Phenomena 	

PLASMA PHYSICS
<ul style="list-style-type: none"> - Theoretical and Experimental Methods in Plasma Physics - Nonlinear Dynamics, Hydrodynamics and Magnetohydrodynamics
COMPUTATIONAL METHODS IN PHYSICS
<ul style="list-style-type: none"> - Theoretical and Computational Methods in Plasma Physics - Numerical Methods in Fluid and Solid Mechanics
UNIVERSITÄT STUTTGART (Germany)
PREPARATORY COURSES
<ul style="list-style-type: none"> - Quantum Theory - Traffic Theory from the Statistical Point of View
PLASMA PHYSICS
<ul style="list-style-type: none"> - Electronic Structure of Condensed Matter I + II - Transport Theory - Fokker-Planck Equation and Irreversible Thermodynamics - Synergetics I + II - Fusion Research - Theory of Chaos - Superconductivity I + II - Advanced Condensed Matter Physics - Solid State Spectroscopy - Quantum Field Theory of Solids I + II - Microstructures of Metals and Alloys I + II - Plasma Technology
COMPUTATIONAL METHODS IN PHYSICS
<ul style="list-style-type: none"> - Mathematical Methods
INSTRUMENTATION AND RADIATION
<ul style="list-style-type: none"> - Physics of Surfaces and Interfaces I + II - Spectroscopy in Biological Condensed Matter I + II - Semiconductor Physics I + II - Nuclear Techniques in Solid State Physics II

MASTER (YEAR 2)

ECTS

GENERAL COURSES	6
ALL UNIVERSITIES	
- Language and Culture courses: see MA1	
ELECTIVE COURSES	24
GHENT UNIVERSITY (Belgium)	
PLASMA PHYSICS	
- Surface Physics and Thin Films - Composites - Physical Materials Science - Optical Materials - Simulations and Modeling for the Nanoscale	
COMPUTATIONAL METHODS IN PHYSICS	
- Mathematical Methods - Fluid Mechanics - Antennas and Propagation - Advanced Electromagnetics	
INSTRUMENTATION AND RADIATION	
- Nuclear Instrumentation	
KUNGLIGA TEKNISKA HÖGSKOLAN (Sweden)	
PLASMA PHYSICS	
- Experimental Fusion Plasma Physics - Space Physics - Chaos and Self-organisation - Field Theory for Wave Guides - Experimental Techniques in Space Plasma Physics	
INSTRUMENTATION AND RADIATION	
- Field Theory for Wave Guides - Scattering of Electromagnetic Waves	
MADRID (UNIVERSIDAD COMPLUTENSE DE MADRID, UNIVERSIDAD POLITÉCNICA DE MADRID, UNIVERSIDAD CARLOS III DE MADRID) (Spain)	
PLASMA PHYSICS	
- Inertial Confinement Fusion - Models for the Description of Nuclear Fusion Plasma - Fusion Reactor Physics - Plasma Diagnostics and Materials Technology - Magneto Hydrodynamics - Plasma in Space and Astrophysics	
COMPUTATIONAL METHODS IN PHYSICS	
- Computational Techniques in Atomic and Molecular Structure, Dynamics and Spectroscopy - Models for the Description of Nuclear Fusion Plasma	

- Computational Plasma Physics
- Magneto Hydrodynamics
- Partial Differential Equations; Applications to Plasmas and Fluids

INSTRUMENTATION AND RADIATION

- Nuclear Physics and Fusion
- Engineering in Fusion Devices: Design, Safety and Fuelling Technology
- Engineering in Fusion Devices: Robotics and Control
- Advanced Materials for Fusion
- Plasma Diagnostics and Materials Technology
- Plasma-Wall Interaction in Fusion Plasmas
- Plasma Technology Applied to Industry

UNIVERSITÉ HENRI POINCARÉ, NANCY I (France)**PLASMA PHYSICS**

- Advanced Statistical Physics
- Characterisation of Turbulence: from Diagnostic Methods to Data Processing
- Plasma-Wall Interactions
- Plasma Diagnostics
- Electric Discharges and Plasma Processing
- Characterisation of Thin Layers
- Advanced Methods in Data Processing
- Equilibrium and MHD Stability of Fusion Plasmas
- Physics and Technology of Magnetic Fusion
- Plasma Physics Complements
- Plasma Turbulence, Transport and Heating

COMPUTATIONAL METHODS IN PHYSICS

- Advanced Statistical Physics
- Finite Elements Methods
- Finite Difference and Finite Volume Methods
- Plasma Modelling and Numerical Simulations
- Advanced Methods in Data Processing
- Equilibrium and MHD Stability of Fusion Plasmas
- Physics and Technology of Magnetic Fusion
- Plasma Physics Complements
- Plasma Turbulence, Transport and Heating

UNIVERSITÄT STUTTGART (Germany)**PLASMA PHYSICS**

- See MA1 +
- Analysis of Turbulent Processes in Plasmas
- Measurement of Turbulent Processes in Plasmas
- Turbulent Processes in Plasmas

COMPUTATIONAL METHODS IN PHYSICS

- See MA1

INSTRUMENTATION AND RADIATION

- See MA1

MASTER DISSERTATION**30**

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 organised at different locations: the students spend one semester (four to six months) at different universities (i.e. host universities). Specialised 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 organised.

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.



120 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

MASTER (YEAR 1)

ECTS

GENERAL COURSES	60
Analytical Techniques	3
Automation and Process Control	3
Biomaterials	3
Biotechnology	3
Composites	3
Creative Textile Design	3
Design Management	3
High Technology Fibres	3
High-Performance Fibres	3
Mechanics of Textile Materials	3
Advanced and Specialised Textile Processing -Dyeing and Finishing	6
Application of Technical Textiles	3
Applied Textile Process Engineering	3
Computer Aided Textile Design and Manufacturing	3
Functional Finishing	3
Functional Textile Materials	3
Medical, Transportation and Construction Textiles	3
Technical Textile Manufacturing Technology	6

MASTER (YEAR 2)

ECTS

GENERAL COURSES	30
Advanced and Specialised Textile Processing - Mechanical	9
Clothing Construction Techniques	3
Ecological and Environmental Aspects	3
Industrial Information Systems	3
International Markets for Textiles and Clothing	3
Management, Logistics and Distribution	3
Quality and Environmental Management	3
Supply Chain Management	3
MASTER DISSERTATION	30

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. The aim is 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.

Admission requirements > diploma

- for non-Flemish degrees: 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 requirements

- > General language requirements: 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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an

original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);

- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.
- > Specific language requirements: each faculty may impose specific language requirements: see: www.UGent.be

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 admission fee for full-time programme (60 ECTS credits): 540 EUR
- reduced tuition fee for students from developing countries : 80 EUR (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 – see: www.UGent.be > international students > international degree students > General information about grants: <http://www.highereducation.be> <http://www.studyinlanders.be>

Start/end of the programme

Two year programme
Start academic year: last week of September

CONTACT

<http://textiles.UGent.be>

Master of Nuclear Engineering

60 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

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 organised 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 organization 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 organised 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.

Admission requirements > diploma

- for non-Flemish degrees:
applicants must have obtained an academic Bachelor of Science degree (or an equivalent degree) in a discipline related to the content of the programme from a recognised University, College or Institute.
- for Flemish degrees:
the exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

Language requirements

> General language requirements:

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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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

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.

an overall band of 5,5; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);

- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements:

each faculty may impose specific language requirements: see: www.UGent.be

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 admission fee for full-time programme (60 ECTS credits): 540 EUR
- reduced tuition fee for students from developing countries : 80 EUR

(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 – see: www.UGent.be > international students > international degree students

> General information about grants:

<http://www.highereducation.be>

<http://www.studyinlanders.be>

Start/end of the programme

One year programme

Start academic year: last week of September



MASTER 1

ECTS

GENERAL COURSES	45
Nuclear Energy: Introduction	3
Nuclear Physics: Introduction	3
Nuclear Materials I	3
Nuclear Fuel Cycle and Applied Radiochemistry	3
Nuclear Materials II	3
Nuclear 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

CONTACT

Ghent University

Faculty of Engineering – Department of
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Belgium Nuclear Research Centre

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Master of Science of Nutrition and Rural Development

Main subjects: HUMAN NUTRITION • RURAL ECONOMICS AND MANAGEMENT • TROPICAL AGRICULTURE

course content

Food security and sustainable development of rural areas requires 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 food 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. 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 nutri-

tion 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 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 back-

grounds. 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.

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.



120 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

MASTER (YEAR 1)	ECTS	MASTER (YEAR 2)	ECTS
GENERAL COURSES	30	OPTIONAL COURSES	20
Applied Statistics	5	HUMAN NUTRITION	
Human Nutrition	5	Food and Nutrition Interventions	5
Tropical Food Production	5	Food and Nutrition Policies	5
Human Development Economics	5	Food and Nutrition Epidemiology	5
Planning and Project Design	7	Community Health Promotion	5
Seminars in Nutrition and Rural Development	3	RURAL ECONOMICS AND MANAGEMENT	
OPTIONAL COURSES	30	Economics and Management of Natural Resources	5
HUMAN NUTRITION		Rural Project Management	5
Food Chemistry	5	Advanced Marketing and Agribusiness Management	5
Food Marketing and Consumer Behaviour	5	Agricultural Sociology and Extension	5
Post-Harvest Handling, Processing and Preservation	5	TROPICAL AGRICULTURE	
Food Safety	4	Rural Development and Poverty	5
Nutrition Disorders	6	MAJOR TROPICAL PLANT PRODUCTION	
Functional Foods	5	Post-Harvest Handling, Processing and Preservation	5
RURAL ECONOMICS AND MANAGEMENT		Properties and Management of Soils in the Tropics	5
Food Marketing and Consumer Behaviour	5	Tropical Forestry	5
Rural Development and Poverty	5	MAJOR TROPICAL ANIMAL PRODUCTION	
Agricultural and Rural Policy	5	Milk and Dairy Technology	4
Farm Management	5	Sustainable Animal Husbandry	6
Agricultural Economics of Developing Countries	5	Animal Disease Control and Veterinary Epidemiology	5
Applied Rural Economic Research Methods	5	ELECTIVE COURSES	10
TROPICAL AGRICULTURE		From the study programmes at UGent	
Tropical Animal Production	4	MASTER DISSERTATION	30
Tropical Crop Production	4		
MAJOR TROPICAL PLANT PRODUCTION			
Ethnobotany and New Crop Development	4		
Molecular Techniques	3		
Plant Biotechnology	5		
Tropical Crop Protection	4		
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		

CONTACT

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Master of Science of Nutrition and Rural Development

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.

Admission requirements > diploma

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 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 option: 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 requirements

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.)

Application deadline

- For VLIR-UDC applicants:
 - before 1st of February
- For non-VLIR applicants who require a visa:
 - before 1st of June
- For all other applicants:
 - before the start of the new academic year

Enrolling institution

Ghent University

Tuition fee

- standard admission fee for full-time programme (60 ECTS credits): 540 EUR
 - reduced tuition fee for students from developing countries : 80 EUR
- (this fee does not include expenses such as course books, excursions, travel expenses, etc.)

Scholarships

A limited number of scholarships for students from developing countries is available, especially for students choosing the subject Human Nutrition (VLIR/UDC).

More information:

- www.vliruos.be
- www.UGent.be > international students

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



Erasmus Mundus: International Master of Science in Rural Development

the Erasmus Mundus Programme by the European Commission

The Erasmus Mundus programme is a cooperation and mobility programme in the field of higher education organised by the European Commission. It aims to enhance quality in European higher education and to promote intercultural understanding through co-operation with third countries. The programme is intended to strengthen European co-operation and international links in higher education by supporting high-quality European Masters Courses, by enabling students and visiting scholars from around the world to engage in postgraduate study at European universities, as well as by encouraging the outgoing mobility of European students and scholars towards third countries.

The Erasmus Mundus Masters Courses constitute the central component around which Erasmus Mundus is built. They are high-quality integrated courses at master level offered by a consortium of at least three universities in at least three different European countries. The courses must be "integrated" to be selected under Erasmus Mundus, which means that they must foresee a study period in at least two universities and that it must lead to the award of a recognised double, multiple or joint diploma. The International Master of Science in Rural development is such a recognised Erasmus Mundus Master coordinated by the Faculty of Bioscience Engineering of Ghent University.

organising institutes

The joint International MSc in Rural Development (IMRD) programme is offered by Ghent University (Belgium), Agrocampus Rennes (France), Humboldt University of Berlin (Germany) and the University of Cordoba (Spain). The qualification obtained is an internationally recognised Master of Science degree jointly awarded by these four Core Partner Universities (CPU).

These institutes offer the full programme in collaboration with Satellite partner Universities (SU) who offer modules in their field of specialisation. The satellite

partner universities are Wageningen University (The Netherlands), the Slovak University of Agriculture in Nitra (Slovak Republic) and the University of Pisa (Italy). The main advantage of this international programme compared with a national master in the same discipline is the organised mobility of students and scholars within the network. Students have access to high level courses at all seven participating institutes and can benefit from the organised mobility programmes. International experience and exposure to different situations is an asset for their further professional career.

course content

Sustainable development is a core challenge in both developed and developing countries. Rural development is an important tool for sustainable development of rural areas. The objective of sustainable rural development is to raise the level of economic performance in all sectors of the rural economy, to shape viable rural communities, to maintain indigenous cultures, to protect the environment and to conserve natural resources and features.

Due to the important changes in developing and transition countries, rural areas suffer from insecurity of property rights, missing markets, deteriorated infrastructure, unemployment, lack of formal systems of social security, resource degradation and other problems. But also in developed regions, rural development faces important challenges concerning economic, social and environmental viability. Sustainable rural development is based on strong links with the whole society. Therefore, the implementation of this new approach of rural development requires trained people with specific and multidisciplinary skills for designing, deciding and managing rural development policies, programmes and projects. The European thinking about rural development emphasizes an integrated approach based on close interaction between rural activities and the rest of the economy. This model is based on multifunctional development of rural areas, active participation of the rural

population, bottom-up planning procedures and involvement of local institutions. The IMRD programme, bringing together leading universities and research institutes in Europe, offers the opportunity to study the European vision on rural development and to experience the diversity of approaches and applications of this European paradigm. An added value of the programme is the integration of social sciences such as economics and sociology with applied agronomic and environmental sciences. The IMRD therefore is a programme accommodated to train specialists in integrated rural development not only from the European Union, but also from developed, developing and transition countries outside the European Union.

course programme and mobility

To obtain the master degree, the student needs to pass with success a study programme of 120 ECTS that fulfils following requirements:

- 80 ECTS of course work with a minimum of 20 ECTS in another university than the entering university;
- minimum 5 ECTS in each of the main course categories:
 - Applied Quantitative and Qualitative Research Methods,
 - Functioning of Technological, Agronomic and Ecological Systems
 - Social Sciences applied to Rural Development
 - Rural Development and Planning,
 - International Institutions, Policies and Organisations
 - Language courses may be taken as elective courses up to a maximum of 10 ECTS.

More specifically:

Year 1:

Minimum 54 and maximum 66 ECTS of course work from the IMRD course list at any of the four CPU's (cf. higher), with a minimum of 20 and a maximum of 36 ECTS per semester. Because mobility is compulsory in the 1st year, the study programme contains a maximum of 36 ECTS



obtained at one of the above mentioned CPU's and a minimum of 20 ECTS in another CPU).

For a complete list of courses per discipline cf. <http://www.imrd.UGent.be>

Year 2:

The student follows a study programme of minimum 54 ECTS and maximum 66 ECTS at one of the seven partner universities (including the Thesis and Case study).

- The programme contains minimum 20 ECTS of course work from courses available at the university where the student defends his/her Master thesis (or equivalent courses at another university) upon approval of the university where the student defends his/her thesis.
- 10 ECTS of Case study.
- 30 ECTS for Master thesis.

Main competence domains of the participating institutes:

- Agricultural and food economics (Ghent University - Belgium)
- Farming systems and rural development (Agrocampus Rennes - France)
- Territorial rural development (University of Cordoba - Spain)
- Governance of natural resources and institutional change (Humboldt University - Germany)

- Public administration and regional development (University of Nitra - Slovakia)
- Food, communication and sustainable rural development (University of Pisa - Italy)
- Rural sociology and development economics (Wageningen University - The Netherlands)

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.

Admission requirements > diploma

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 requirements

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.)

Application deadline

- for foreign students applying for scholarship: normally December 31, unless otherwise mentioned on the IMRD website
- for other categories: see IMRD website

Enrolling institution

Registration by paying the tuition into the IMRD account and by registering in the entry institute

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 inside Europe.

Scholarships

- Non-EU students may apply for an Erasmus Mundus grant or for other international grants (as mentioned e.g. on <http://www.imrd.ugent.be/home/erasmus.html>)
- EU students can obtain an Erasmus grant to partly finance their study. They may also apply for grants to study up to 3 months in connected network institutes in China (Erasmus Mundus Action 3) to finance the obligatory case study as well as for other parts of the study programme (e.g. data collection for dissertation).

Start/end of the programme

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

Erasmus Mundus: International Master of Science in Rural Development

120 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

MASTER (YEAR 1)		ECTS	MASTER (YEAR 2)		ECTS
BASIC TRAINING	MIN 54 AND MAX 66		CASE STUDY		10
MIN 20 AND MAX 36 ECTS PER SEMESTER			In Pisa or Nitra for third country students and in China for EU-students		
<p>(Because mobility is compulsory during the first academic year, the study programme contains a maximum of 36 ECTS obtained at one of the four diploma issuing universities and a minimum of 20 ECTS at another university) The Basic Training should consist of at least 5 ECTS from each of the following disciplines:</p>			ADVANCED TRAINING		MIN 20
DISCIPLINE 1			To be taken from list of available courses in the specialisation of the Master dissertation according to the rules of the institute where thesis will be defended		
APPLIED QUANTITATIVE AND QUALITATIVE RESEARCH METHODS			MASTER DISSERTATION		30
DISCIPLINE 2					
FUNCTIONING OF TECHNOLOGICAL, AGRONOMIC AND ECOLOGICAL SYSTEMS					
DISCIPLINE 3					
SOCIAL SCIENCES APPLIED TO RURAL DEVELOPMENT					
DISCIPLINE 4					
RURAL DEVELOPMENT AND PLANNING					
DISCIPLINE 5					
EUROPEAN INSTITUTIONS, POLICIES AND ORGANISATION For a complete list of courses per discipline cf. http://www.imrd.UGent.be					
ELECTIVE COURSES	MAX 10				

CONTACT

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Master of Science of Aquaculture

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 multidisciplinary 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 evolu-

tion, however, is based on developments in food technology, species selection, zoo-technical aspects, management, automation, disease control etc. It is accepted that the lack of well-trained specialists may be the bottleneck for the further expansion of aquaculture.

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 15 minutes. This is followed by a discussion with the jury members of about 10 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 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.

Admission requirements > diploma

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.

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.

Language requirements

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.)

Deadline application

> General deadlines:

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

Application deadline

Ghent University

Tuition fee

- standard admission fee for full-time programme (60 ECTS credits): 540 EUR
- reduced tuition fee for students from developing countries : 80 EUR

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

(+ ca. 200 to 600 EUR can be charged for international excursions)

Scholarships

> On www.vliruos.be

> Offered by Ghent University for master studies: a limited number of grants awarded on a competitive basis – see: www.UGent.be > international students > international degree students

Start/end of the programme

Two year programme.

Start: last week of September

The Master of Science of Aquaculture deals with the most important aspects of aquaculture, of both marine and freshwater 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 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.

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.

MASTER (YEAR 1)

ECTS

GENERAL COURSES

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)

ECTS

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 Warmiński - Mazurski w Olsztynie, Poland), or from the UGent list below. Subject to motivation max. 5 ECTS 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

CONTACT

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 Laboratory of Aquaculture & Artemia Reference Center
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Master of Science of Food Technology

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 KULeuven 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 com-

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 KULeuven or UGent.

Admission requirements > diploma

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, with an end result of minimum second class upper or equivalent.

Language requirements

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.

mon to all participants. The first semester is organised at UGent while the second semester is organised at KULeuven. 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

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.)

Application deadline

- For students applying for a VLIR scholarship: deadline for application is 1st of February
- For students who require a visa: deadline for application is 1st of June
- For students who do not require a visa: application until the start of the programme

Enrolling institute

Alternating: Ghent University and K.U. Leuven

Tuition fee

- standard admission fee for full-time programme (60 ECTS credits): 540 EUR
 - reduced tuition fee for students from developing countries : 80 EUR
- (this fee does not include expenses such as course books, excursions, travel expenses, etc.)

Scholarships

> On www.vliruos.be
> Offered by Ghent University for master studies: a limited number of grants awarded on a competitive basis – see: www.UGent.be > international students > international degree students

Start/end of the programme

Two year programme.

Start: last week of September

End: second week of September



120 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

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 'Postharvest and Food Preservation Engineering' (PFPE) is organised at KULeuven, while the specialisation 'Food Science and Technology' (FST) is organised at 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 organizations (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.

MASTER (YEAR 1)

ECTS

GENERAL COURSES	60
IN DEPTH EDUCATION IN "FOOD SCIENCE"	
Biochemistry and Physiology of Perishable Crops ²	4
Food Chemistry and Analysis ¹	7
Food Marketing and Consumer Behaviour ¹	4
Food Microbiology and Analysis ¹	7
Nutrition and Dietetics ²	4
IN DEPTH EDUCATION IN "ENGINEERING AND FOOD ENGINEERING"	
Applied Statistics ¹	5
Engineering Properties and Principles of Food Machinery ²	7
Food Processing ¹	7
Thermal Processing of Foods ²	8
Transport Phenomena and Engineering Kinetics ²	7

MASTER (YEAR 2)

ECTS

CLUSTERS	18
MAJOR FOOD SCIENCE AND TECHNOLOGY	
3 mandatory courses + 1 FST-course:	
Statistical Topics in Food Technology ¹	4
Food Colloids ¹	5
Functional Foods ¹	5
Milk and Dairy Technology (FST) ¹	4
Technology of Fishery Products (FST) ¹	4
Plant Based Food Products and Ingredients (FST) ¹	4
Meat and Meat Products (FST) ¹	4
MAJOR POSTHARVEST AND FOOD PRESERVATION ENGINEERING	
3 mandatory courses + 1 PFPE-course:	
Low Temperature Processing of Foods ²	5
Mathematical Planning and Advanced Statistics ²	4
Design and Management of Storage and Distribution Structures ²	5
HACCP-Concepts and Quality Assurance: Workshop (PFPE) ²	4
Postharvest Pest Management and Disease Control (PFPE) ²	4
Food Packaging and Transportation (PFPE) ²	4
ELECTIVE COURSES	
12	
From the major courses or from the list below:	
Food Toxicology ¹	4
Fruit and Vegetable Technology ²	4
Cereal Science and Technology ²	4
Food Fermentations ¹	4
Food Regulation: Workshop ¹	4
Workshop Food Technology ^{1 2}	4
MASTER DISSERTATION	
30	

1 = at UGent, 2 = at KULeuven

CONTACT

Ghent University

Laboratory of Food Technology and Engineering

Mrs. ir. Katleen Anthierens

pp. Prof. dr. ir. K. Dewettinck

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www.iupfood.be

Master of Science of Environmental Sanitation

Majors: SOIL • WATER • AIR

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;

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.

Admission requirements > diploma

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 requirements

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

- 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 credits) has to be linked. Each major consists of three courses corresponding to 11 credits.

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.)

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 admission fee for full-time programme (60 ECTS credits): 540 EUR
- reduced tuition fee for students from developing countries : 80 EUR (this fee does not include expenses such as course books, excursions, travel expenses, etc.)

Scholarships

> on www.vliruos.be

> offered by Ghent University for master studies: a limited number of grants awarded on a competitive basis – see: www.UGent.be > international students > international degree students

Start/end of the programme

Two year programme.

Start: last week of September



120 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

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.

MASTER (YEAR 1)

ECTS

GENERAL COURSES	54
Environmental Ecology	7
Environmental Chemistry	7
Environmental Biology and Microbiology	7
Environmental Toxicology and Risk Assessment	7
Analysis and Abatement of Air and Water Pollution	7
Environmental Soil Science	7
Biosolids and Solid Waste Treatment	7
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
Pollution 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)

ECTS

GENERAL COURSES	13
Biotechnological Processes of Environmental Sanitation	5
Clean Technology	3
Environmental Impact Assessment: Integrated Project	5
CLUSTERS	11
11 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
Min. 6 credits from the list of elective courses offered in the first year or from other English Master programmes of Ghent University	
MASTER DISSERTATION	30

CONTACT

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

Master of Science of Physical Land Resources

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

Main subjects: SOIL SCIENCE • LAND RESOURCES ENGINEERING

course content

The overall objective of the programme in Physical Land Resources is that the graduates have the expertise to critically reflect on and answer questions from a responsible position, 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 reservations?
- 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 principal determinant of eco systems 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 ensure a wise use and management of this "basic commodity", society requires expertly 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.

Main subject: Soil Science

The major in Soil Science 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 thesis research accounts for 30 credits, and as such represents an important part of the MSc Programme. Time wise 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 thesis 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.

Admission requirements > diploma

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 requirements

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.)

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

First year: Ghent University

Second year, major Land Resources Engineering: Vrije Universiteit Brussel (VUB)

Tuition fee

- standard admission fee for full-time programme (60 ECTS credits): 540 EUR
- reduced tuition fee for students from developing countries : 80 EUR

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

Scholarships

> on www.vliruos.be

> offered by Ghent University for master studies: a limited number of grants awarded on a competitive basis – see: www.UGent.be > international students > international degree students

Start/end of the programme

Two year programme.

Start: last week of September of the following year



120 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

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 discipline or orientation that is taken. These courses –all compulsory– form the common core for all the students taking the MSc programme in 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 thesis.

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, and more in particular a suitable spatial planning, sustainable and optimised use and management of Physical Land Resources. This part of the programme has a strong focus on agricultural use and applications.

The courses in Land Resources Engineering are oriented towards the role of land and soil in geotechnics and in applied geology and geomorphology (use of soil as a building material or for foundations, slope stability and stability of excavations); the role of soil in water management, soil management in relation to environmental issues like erosion, sediment transport, coastal development). Students taking this main subject have to register at the “Vrije Universiteit Brussel” (VUB) for the second year of this master.

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

MASTER (YEAR 1)

ECTS

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

cartographic and remote sensing data, and interpret analysed data. This is the basis for regional planning, land evaluation 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 to soil quality and to assess the resulting 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 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, as through the interaction with colleague-students of many different, mostly non-European nationalities.

MASTER (YEAR 2)

ECTS

OPTIONAL COURSES	30
SOIL SCIENCE	
Soil Fertility	5
Soil Degradation	5
Land Evaluation	5
Soil Water Management	5
To be chosen (at least one course from list below, 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	
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

CONTACT

Ghent University
Physical Land Resources
Krijgslaan 281/S8, 9000 Gent
www.plr.UGent.be
PLRprog.adm@UGent.be

Master of Laboratory Animal Science

course content

At present days the use of laboratory animals in all kinds of experiments in several disciplines is most controversial. There is a significant social (and moral) pressure to limit the number of experiments involving animals and, where possible, to substitute these by alternative research methods. In experiments adopting laboratory animals, the national and international legal regulations concerning animal welfare and the protection of laboratory animals, should be taken into account.

The European Council has set up guidelines, and the Federation for European Laboratory Animal Science Associations (FELASA) has further elaborated these guidelines and laid down an educational programme for scientists responsible for animal experiments (category C) and for specialists in laboratory animal science (category D).

In Belgium, adequate training in laboratory animal science is provided at the Faculty of Veterinary Medicine of Ghent University, incorporating requirements of both category C and D. These courses introduce those elements which have become essential requirements for using animals in research, teaching or testing programmes. They primarily deal with the responsibilities one assumes when one intends to use animals in his work. The programme provides a working knowledge on the regulations, as well as familiarity with the factors that affect the selection, acquisition and maintenance of experimental animals and last but not least the awareness of the ethical and social issues involved with the use of animals in biomedical research.

course structure

This master is presented as a part-time programme of 60 credits, spread over four semesters in two successive academic years.

The first semester starts with the Basic Course which is divided in two parts, in order to provide the candidates the basic knowledge concerning the specific practical and scientific aspects of the work with animals produced and used for scientific purposes. The programme of the Basic Course is organised yearly as an intensive two-week course, and is followed by an examination some weeks later.

The content of this basic course is in accordance with the recommendations of the Federation of Laboratory Animal Science Associations (FELASA) for the education and training of persons working with laboratory animals, competence category C, and with appendix VIII of the Belgian Royal Decree of 14th November 1993. Students who successfully complete both parts of the Basic Course receive a certificate.

The remaining part of the programme consists of optional courses and is meant to extend and to deepen the knowledge acquired in the Basic Course; it provides the student with the knowledge expected from a laboratory animal specialist.

Apart from the lectures and practical exercises an apprenticeship in a laboratory animal facility is included in the programme. Every student is also expected to write a master dissertation.

Students who successfully passed the examinations of the optional courses and the master dissertation receive the diploma of Master of Laboratory Animal Science.

career perspectives

As stated above, in recent years, as a consequence of major improvements in the health monitoring quality of laboratory animals, there has been an explosive increase in the awareness of animal welfare and the complexity of biomedical research with animals. Laboratory animal science is a highly specialized and rapidly evolving field in biomedical science.

There are over 500 facilities working with laboratory animals in Belgium. Since laboratory animal science indeed has an enormously broad scope and a high impact on research with animals, knowledge in this field is urgently needed. Likewise, in the European Union, there is a steadily increasing demand for persons qualified in laboratory animal science. This course provides a curriculum for specialization in laboratory animal science, aiming to fill this gap of competence.

CONTACT

Ghent University

Faculty of Veterinary Medicine - Department of Pathology, Bacteriology and Poultry Diseases
Co-ordinator: Prof. Dr. K. Hermans
Salisburylaan 133, 9820 Merelbeke
T +32 (0)9 264 74 41
katleen.hermans@UGent.be



60 ECTS credits - Part-time (2 years) • Language: English • Degree: Master

MASTER

ECTS

GENERAL COURSES 10

Basic Course in Laboratory Animal Science:	
- Partim 1: General Topics	5
- Partim 2: Specific Topics	5

ELECTIVE COURSES 21

Four courses to be chosen from:	
Advanced Course in Ethology and Animal Welfare	3
Advanced Course in Morphology and Medical Imaging	3
Advanced Course in Reproduction Techniques and Transgenesis	3
Advanced Course in Gnotobiology and Disease Control:	
- Partim Virology/Parasitology	3
- Partim Bacteriology and Non-Infectious Diseases	3
Advanced Course in Animal Experimentation	3
Three courses to be chosen from:	
Advanced Course in Morphology and Medical Imaging	3
Advanced Course in Physiology, Pharmacology and Toxicology	3
Advanced Course in Gnotobiology and Disease Control. Partim Hygiene and Immunology	3
Advanced Course in Anaesthesiology and Surgical Techniques	3
Poikilotherms, Primates and Other Special Laboratory Animals	3

WORKING PLACEMENT 9

Including Reporting

MASTER DISSERTATION I 5

MASTER DISSERTATION II 15

The content of this course is in conformity with the recommendations of the Federation of Laboratory Animal Associations (FELASA) for the education and training of persons working with laboratory animals, competence category D.

Master dissertation

The master dissertation can comprise own research (with laboratory animals), a literature review of a topic concerning laboratory animals or a follow-up of interesting case(s) combined with a literature review, concerning laboratory animals

Admission requirements > diploma

- For non-Flemish degrees: Holders of an academic degree in the field of veterinary medicine, medicine, dentistry, pharmacy, biology, biotechnology, biomedical sciences and agricultural engineering. No research experience necessary. For persons with (or aspirations towards) leading functions in working with laboratory animals
- For Flemish degrees: The exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

Language requirements

- > General language requirements: 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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);

- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.
- > Specific language requirements: each faculty may impose specific language requirements: see: www.UGent.be

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 admission fee for full-time programme (60 ECTS credits): 540 EUR
- reduced tuition fee for students from developing countries : 80 EUR (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 – see: www.UGent.be > international students > international degree students
- > General information about grants: <http://www.highereducation.be> <http://www.studyinflanders.be>

Start/end of the programme

Two year part-time programme.
Start academic year: last week of September

Master of Applied Pharmaceutical Sciences

60 ECTS credits • Full-time or Part-time • Language: English • Degree: Master

course content

The Master studies of Applied Pharmaceutical Sciences are organized by the Faculty of Pharmaceutical Sciences. It is a theoretical and practical training in various aspects of the pharmaceutical sciences, including pharmaceutical technology, enzymology, immunochemistry, drug analysis and quality control, food and food quality assurance, bio-analysis, biomolecular analysis, etc. The students are also involved in a research project with individual guidance, in order to gain a clear insight in how a research project is planned, set up, carried out, interpreted and reported.

course structure

Students compose their own programme by choosing four courses from an elective courses list with lectures only and one course from a list of elective courses which include practical exercises. These lists encompass analytical, bio-analytical as well as pharmaceutical-technological subjects. Each student must also write a dissertation about a research project to be carried out in one of the laboratories involved.

career perspectives

This study programme is particularly interesting for students who want to get acquainted with a number of specific pharmaceutical topics, the knowledge of which may be decisive in finding a job in the pharmaceutical sector.

This study programme may also be considered as a useful preparation for students who intend to start doctoral research (PhD) in one of the programme-related topics.

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.

Admission requirements > diploma

- For non-Flemish degrees:
The requirement is a master degree or a bachelor degree of at least 4 years of university studies. One will first have to go through an extensive admission procedure.
- For Flemish degrees:
The exhaustive list of degrees giving access to this master can be consulted in the online course catalogue.

Language requirements

- > General language requirements:
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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements:
each faculty may impose specific language requirements: see: www.UGent.be

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

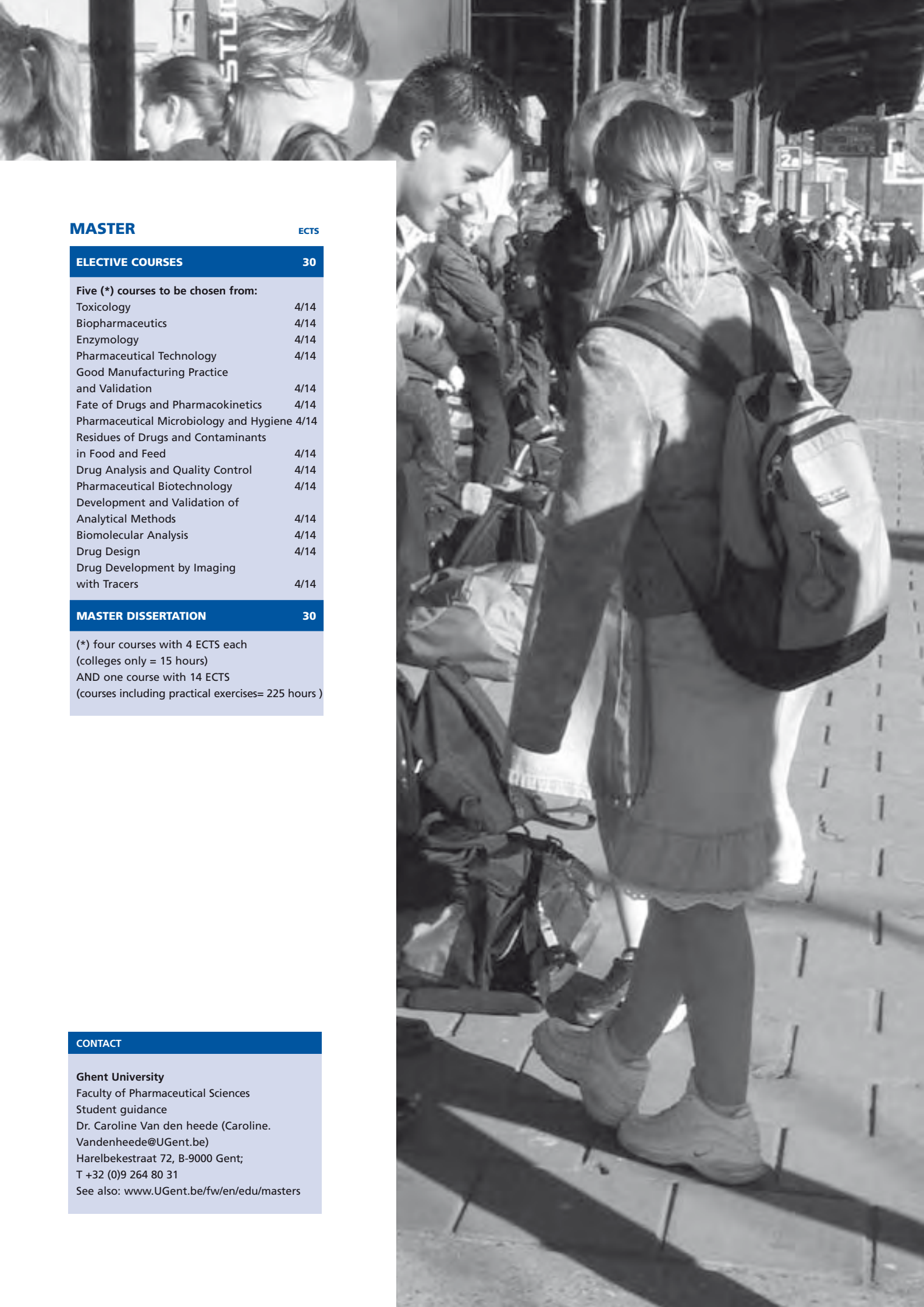
- standard admission fee for full-time programme (60 ECTS credits): 540 EUR
 - reduced tuition fee for students from developing countries : 80 EUR
- (this fee does not include expenses such as course books, excursions, travel expenses, etc.)

Scholarships

> offered by Ghent University for master studies: a limited number of grants awarded on a competitive basis – see: www.UGent.be > international students > international degree students > 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



MASTER

ECTS

ELECTIVE COURSES

30

Five (*) courses to be chosen from:

Toxicology	4/14
Biopharmaceutics	4/14
Enzymology	4/14
Pharmaceutical Technology	4/14
Good Manufacturing Practice and Validation	4/14
Fate of Drugs and Pharmacokinetics	4/14
Pharmaceutical Microbiology and Hygiene	4/14
Residues of Drugs and Contaminants in Food and Feed	4/14
Drug Analysis and Quality Control	4/14
Pharmaceutical Biotechnology	4/14
Development and Validation of Analytical Methods	4/14
Biomolecular Analysis	4/14
Drug Design	4/14
Drug Development by Imaging with Tracers	4/14

MASTER DISSERTATION

30

(*) four courses with 4 ECTS each
(colleges only = 15 hours)
AND one course with 14 ECTS
(courses including practical exercises= 225 hours)

CONTACT

Ghent University

Faculty of Pharmaceutical Sciences
Student guidance

Dr. Caroline Van den heede (Caroline.
Vandenheede@UGent.be)

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T +32 (0)9 264 80 31

See also: www.UGent.be/fw/en/edu/masters

Postgraduate Studies in Logic, History and Philosophy of Science

60 ECTS credits • Full-time • Language: English • Degree: Certificate of Postgraduate Studies

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. 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.

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.

Admission requirements > diploma

- 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 requirements

> General language requirements:

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); from 2009- 2010 on: at least 570 (paper-based) or 87

(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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements:

each faculty may impose specific language requirements: see: www.UGent.be

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

58,10 EUR

Scholarships

General information about grants:

<http://www.highereducation.be>

<http://www.studyinlanders.be>

Start/end of the programme

One year programme

Start academic year: last week of September

COURSE PROGRAMME

ECTS

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
DISSERTATION	18

CONTACT

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 Biosafety in Plant Biotechnology

60 ECTS credits • Full-time • Language: English • Degree: Certificate of Postgraduate Studies

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, and in order to assist in the legislation and interpretation of biosafety risk assessment and communication 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.

organising institutions

The course is an international programme of UNIDO within a framework of co-operation with the University of Concepción (UDEDEC, Chile), the University of Malaya (Malaysia), The Pontifical Catholic University of Sao Paulo (Brazil) and the University of Ancona (Italy).

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.

Admission requirements > diploma

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. Preference will be given to students from Africa.

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 above mentioned.

Language requirements

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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements: each faculty may impose specific language requirements: see: www.UGent.be

Application deadline

August 31

Enrolling institution

Ghent University

Tuition fee

580 EUR; students working in the private sector pay a supplementary tuition fee of max. 2050 EUR. Students should cover their own expenses (travel, accommodation, per diem) for the on campus periods.

Scholarships

With the support of the Flemish Government five scholarships are available. The scholarships cover main expenses for travel and accommodation, and a per diem for the two on campus periods at Ghent University. Preference will be given to applicants from Africa.

Scholarship application form can be downloaded from the course website

> general information about grants:

<http://www.highereducation.be>

<http://www.studyinflanders.be>

Start/end of the programme

One year programme

start: September 29, 2008

COURSE PROGRAMME

ECTS

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



CONTACT

Ghent University - Faculty of Science

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www.ipbo.UGent.be

Postgraduate Studies in Meteorology and Numerical Weather Prediction

30 ECTS credits • Part-time • Language: English • Degree: Certificate of Postgraduate Studies

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). This 10-year international global atmospheric research and development programme was established by the WMO (in 2003) and is aimed at reducing and mitigating the impact of disasters by transforming forecasts into information for decision making. This includes:

- extending the range and accuracy of weather forecasts;
- development of warnings for decision-making;
- assessing the impact of weather forecasts in the strategies to minimize the impact of disasters.

The Postgraduate Studies in Meteorology and Numerical Weather Prediction 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 30 ECTS in two semesters (in one academic year).

career perspectives

Researcher in Meteorological Services in Europe, Phd research.

organising institution

Ghent University (BE)

partner institutions

Royal Meteorological Institute of Belgium
Belgocontrol

Admission requirements > diploma

Scientists with some background in mathematics and/or physics who wish 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 requirements

> General language requirements:
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); from 2009- 2010 on: at least 570 (paper-based) or 87 (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; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements:

each faculty may impose specific language requirements: see: www.UGent.be

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: 523,70 EUR (credit contract: 58,10 EUR + (credits x 15,60 EUR)

Scholarships

General information about grants:

<http://www.highereducation.be>

<http://www.studyinlanders.be>

Start/end of the programme

One year programme

Start academic year: last week of September

COURSE PROGRAMME

ECTS

General Meteorology	4
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
Total	30

CONTACT

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http://wms.UGent.be/meteo_nwp/



Postgraduate studies in Fire Safety Engineering

60 ECTS credits • Part-time • Language: English • Degree: Certificate of Postgraduate Studies

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.

Admission requirements > diploma

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 requirements

> General language requirements:

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); from 2009- 2010 on: at least 570 (paper-based) or 87 (internet-based) - the UGent TOEFL code is 2643 - the test can be maximum two (2) years old;

career perspectives

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

- a certificate of the British Council (IELTS) with an overall band of 5,5; from 2009-2010 on: an original 'test report form' (TRF) van IELTS with a score of at least 6.0 (the test can be maximum two (2) years old);
- a certificate awarded by the (Ghent) University Language Centre confirming proficiency in English.

> Specific language requirements:

each faculty may impose specific language requirements: see: www.UGent.be

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 EUR for the full course, manuals not included

Scholarships

> general information about grants:

<http://www.highereducation.be>

<http://www.studyinflanders.be>

Start/end of the programme

Two year part-time programme

Start academic year: last week of September

COURSE PROGRAMME

ECTS

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	3 (1)
Heat and Mass Transfer	3 (1)
Steel and Concrete Structures	6 (2)

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

CONTACT

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