



INTRODUCING KAHO SINT-LIEVEN



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3	Welcome
4	1 KaHo Sint-Lieven: a Catholic university college in Flanders from an international point of view
6	2 Educational structure in Flanders
8	3 Study programmes
10	4 KaHo Sint-Lieven: more than education 4.1 Services 4.2 Research 4.3 KaHo Sint-Lieven International 4.4 Postgraduate and continued education
17	5 Practical information for visitors and foreign students
19	6 Facts and Figures





The Katholieke Hogeschool Sint-Lieven welcomes you to a dynamic and young higher education institution. The educational traditions of the 8 merging institutions were integrated in a new unit when KaHo Sint-Lieven was established in 1995.

This guide will help you to find your way around in KaHo Sint-Lieven and will offer vital information to any visitor, whether here in Flanders for a week, 6 months or longer.

In KaHo Sint-Lieven you can expect a well-structured student counselling service, tailor-made courses and study programmes, well-supervised practical trainings and final projects, multiple contacts with trade and industry.

The infrastructure (auditoria, laboratories, media centres) and facilities (social service, cafeterias, accommodation service) have been set up to provide an agreeable environment for study. Student participation in KaHo Sint-Lieven has been a longstanding tradition.

Students participating in European exchange programmes such as Erasmus or Leonardo da Vinci can use this brochure to help them prepare and organise their exchanges. Visiting staff will find below all basic information about KaHo Sint-Lieven.

More detailed information on study programmes and curricula can be obtained from the ECTS course descriptions which have been produced for all courses in our institution, and which are available on www.kahosl.be.

An international interest is an essential part of the KaHo Sint-Lieven policy. An open view across the borders constitutes a conditio sine qua non for an up-to-date higher education training. In the wake of the higher education evolutions following the Bologna process, KaHo Sint-Lieven explicitly wishes to be engaged in the shaping of the future European higher education.



International contacts and exchanges will prepare students to fulfil a professional career in the Europe of the 21st century. For this reason I really hope that you will enjoy everything our institution has to offer you.

*Prof.dr. F. Baert
Managing Director KaHo Sint-Lieven*

1 KaHo Sint-Lieven:

a Catholic university college in Flanders

Flanders

"Vlaanderen", ['vla:nd r n], Flanders, the northern, Dutch-speaking part of Belgium is located within 300 kilometres of Amsterdam, Rotterdam, Cologne, London, Luxembourg and Paris.

Historically, culturally and economically, Belgium can be considered as the centre of the European community. Dutch, French and German are the three national languages.

Belgium is a federal state and hence Flanders has its own parliament and government. Within the framework of its own responsibilities, the government of Flanders can conclude international treaties.

Flanders combines an excellent geographic location with a fully integrated transport system, a technologically advanced telecommunication network, a peaceful social climate. It is inhabited by energetic and zealous people.

Flanders has got 3 important ports and a strongly export oriented industry.

It is in this region that the KaHo Sint-Lieven is situated, with campuses in Aalst, Gent and Sint-Niklaas.

Visitors to the KaHo Sint-Lieven will experience the atmosphere and beauty of these three towns.

...and KaHo Sint-Lieven

As mentioned in the introduction, KaHo Sint-Lieven is a young institution but with a rich tradition. The history of KaHo Sint-Lieven comes about in the histories of the 8 former higher education institutions, which have merged in 1995.

Each campus has its own traditions and can look back on a rich - be it shorter or longer - past. Some of the eight founding institutions were established in the 19th century.

This diversity in background adds an extra dimension to the KaHo Sint-Lieven.

Since the merger, KaHo Sint-Lieven has reorganised and grouped into 3 campuses in 3 regions in Aalst, Gent and Sint-Niklaas.



<http://www.kahosl.be/english>

Aalst

Aalst is situated approximately halfway between Brussels, the capital of Europe, and Gent, along the E40 motorway (Brussels 27 km and Gent 35 km).

The first known record of Aalst dates back to 866. The city's location at a point where the major trade route crossed the river Dender was important for its development.

Aalst has now become an important tourist centre thanks to the historical buildings that have been preserved in its centre and in some of its rural parishes, and it is especially renowned for its annual carnival.

Access routes, city map, tourist information and general information on the city can be obtained at <http://www.aalst.be>



Gent

Gent or "Ghent", situated at some 50 kilometres' distance from Brussels, Bruges and Antwerp is one of the most beautiful historical cities in Belgium. It is blessed with an attractive and historically rich city centre, together with an impressive art patrimony. The castle of counts, the St. Bavo cathedral and the Graslei with its guild houses are but a few examples.

Thanks to prestigious events such as the five-yearly Floralties, the annual Festival of Flanders and the "Gentse feesten", the Gent festivities, Gent attracts ten thousands of visitors year after year. As a congress town, with the International Congress Centre and the Flanders expo halls, Gent hosts all kinds of symposia and congresses, the most prestigious of which is the Flanders' Technology International trade fair.

Gent is a dynamic town with an outstanding historical character.

Access routes, city map, tourist information and general information on the city can be obtained at <http://www.gent.be>



Sint-Niklaas

Sint-Niklaas is situated in a beautiful area between the rivers Schelde and Durme and is one of the larger cities in Flanders. This animated and pleasant town, also called the "capital of the Land van Waas" is certainly worth a visit. Places of interest are the Neo-Gothic town hall, the castle Walburg, the recreational park "De Ster" and the shopping streets surrounding the largest market square in Belgium.

Every summer, Sint-Niklaas is also the location of several international ballooning meetings.

Access routes, city map, tourist information and general information on the city can be obtained at <http://www.sint-niklaas.be>



2 Educational structure in Flanders

Belgium considers proper education as a primary right of every citizen which is guaranteed by the constitution. The barriers to entry for education have been kept as low as possible. Primary and secondary education are free of charge and the government has set up a system of study allowances. The degree of scolarity in Belgium is today among the highest in Europe.

The organisation of education is coordinated by the Flemish government, but three major bodies organise education:

- the state education organised by the government;
- the free subsidized education (mainly Catholic schools)
- the state subsidized education organised by provinces, towns and communities.

School attendance is compulsory until the age of 18. From 2.5 years a child can attend nursery school. Primary education is given in 6 forms from the age of 6 to 12. Secondary education is again a six year programme between the ages of 12 and 18 and is split up into different types: general secondary school, technical, vocational and art secondary school trainings.

After completing secondary school with success, students have access to any form of higher education, except for a few university study programmes which are only accessible after entry examinations (medical studies, dentistry...)

Transitions between the different types in higher education are possible.

CHANGING HIGHER EDUCATION IN FLANDERS

In accordance with the ideas of the Sorbonne (1999) and Bologna (2000) declarations about the restructuring of higher education in Europe, the Flemish Minister of Education is going through a process to reform the Flemish higher education system.

One of the first objectives in this transformation process is to stimulate co-operation between institutions of higher education. Therefore universities and hogescholen have drawn up agreements in order to create "associations", linking both types of institutions together.

KaHo Sint-Lieven has decided to associate with the Catholic University of Leuven (KU Leuven), Flanders' largest and oldest university. On 11th July 2002 the association agreement between the KU Leuven and KaHo Sint-Lieven was signed. The below institutions constitute the "Association KU Leuven":

Katholieke Universiteit Leuven
Katholieke Universiteit Brussel
Europese Hogeschool Brussel
Hogeschool Sint-Lukas Brussel
Hogeschool voor Wetenschap & Kunst
Katholieke Hogeschool Brugge-Oostende
Katholieke Hogeschool Kempen
Katholieke Hogeschool Leuven
Katholieke Hogeschool Limburg
Katholieke Hogeschool Mechelen
Katholieke Hogeschool Zuid-Westvlaanderen
Lessius Hogeschool
Groep T
Katholieke Hogeschool Sint-Lieven



The Flemish government passed a new Decree on the structure of higher education on 2nd April 2003. From the academic year 2004-2005 onwards, this reform has changed the degrees that are awarded by universities and hogescholen.

The European system of Bachelor's and Master's Degrees has also been implemented in Flanders. The Bachelor degrees have been divided into 2 categories, professionally oriented bachelor programmes and academic bachelor programmes with bridging programmes between the two types.

For **Bachelor's programmes** (both professional and academic) the general admission requirement is that applicants need a secondary school diploma or leaving certificate (or an equivalent foreign degree). To enter some study programmes, an entry examination is organised. Subsequent Bachelor programmes require minimally a professional Bachelor's Degree.

Master's programmes are accessible for students with an appropriate academic Bachelor's degree. Students with a professional Bachelor's degree can enter a Master's programme after following a preparatory programme. Subsequent Master's programmes require a Master's degree from applicants.

● **Undergraduate studies : Bachelor's degree**

All students will obtain a Bachelor's degree after successfully completing a study period of at least 180 ECTS credits.

Professionally oriented Bachelor study programmes prepare students for specific professions in industry, agriculture, health care, social work, computer science, applied arts or the media. These study programmes are focused on applied science and will include a period of practical training or work placement.

Academic Bachelor degrees prepare students for advanced studies at Master's level. These degrees will be awarded by universities and some hogescholen in the framework of associations.

● **Postgraduate studies : Master's degree**

Master programmes combine education and research and a Master's thesis. They cover at least 60 ECTS credits, but depending on the field of study some Master programmes may last longer. These study programmes are organised at universities and at hogescholen in the framework of an association.

● **Doctoral studies : Ph.D. degree**

The doctoral degree is the highest level of specialisation in scientific research. It is based on an original research project that takes at least two years and which results in the public presentation of a doctoral thesis. This degree will only be awarded by a university.

● **Accreditation**

One of the results of the "Bologna-reform" is that in Flanders the concept of accreditation will be introduced. The accreditation of a study programme is the formal recognition by an independent organisation, which verifies whether this programme meets the pre-determined minimal quality requirements. This quality mark will guarantee that the accredited programme offers the knowledge, understanding, skills and qualifications associated with an internationally recognised Bachelor's or Master's degree.

3 Study programmes at KaHo Sint-Lieven

Below is an overview of the different curricula , options and specialisations organised

Information on detailed course programmes and academic calendars are available at the student service or at the student office on each campus as well as on the website <http://www.kahosl.be/English>

Study field	Study programme/ Degree	Specialisations	Location
Biotechnology	Bachelor in agro- and biotechnology	Food science	Campus Waas
		Greenery	
		Agriculture	
		Animal care	
Business studies	Bachelor in company management	Accountancy-fiscality	Campus Dirk Martens
		Marketing	
	Bachelor in office management	Medical management assistant	Campus Dirk Martens
		Management assistant	
Teacher training	Bachelor in education, pre-primary school education		Campus Dirk Martens
	Bachelor in education, primary school education		Campus Dirk Martens
	Bachelor in education, secondary school education		Campus Waas
			Campus Waas
Health Care	Bachelor in biomedical laboratory technology	Medical laboratory technology	Campus Rabot
		Pharmacy and biotechnology	
	Bachelor in food and dietary science		Campus Rabot
	Bachelor in nursing	Psychiatric nursing	Campus Waas
		Social nursing	
		Hospital nursing	Campus Waas Campus Dirk Martens
		Geriatric nursing	Campus Dirk Martens
	Bachelor in midwifery		Campus Waas
			Campus Dirk Martens
Health Care – Postgraduate programme	Bachelor after bachelor in intensive care and emergency care		
Industrial science and technology 1 –cycle programmes	Bachelor in construction		Campus Dirk Martens
	Bachelor in real estate		Campus Dirk Martens
	Bachelor in chemistry	Chemical laboratory technology	Campus Rabot
		Biochemistry	
		Environmental care	
	Bachelor in electro-technology		Campus Rabot
	Bachelor in electronics	Electronics	Campus Rabot
		Information and communication technology (ICT)	
	Bachelor in electro-mechanics	Electromechanics	Campus Dirk Martens
		Medical instrumentation	
		Climatisation	
		Process automation	
	Bachelor in facility management		Campus Waas
	Bachelor in mechanical design and production technology		Campus Rabot

Study field	Study programme/ Degree	Specialisations	Location
Industrial science and technology 2 – cycle study programmes	Bachelor in industrial science in civil engineering		Campus Rabot Campus Dirk Martens
	Bachelor in industrial science in chemistry		
	Bachelor in industrial science in electronics		
	Bachelor in industrial science in electro-mechanics		
	Master in industrial science in civil engineering		Campus Rabot
	Master in industrial science in surveying		
	Master in industrial science in biochemistry		
	Master in industrial science in chemistry		
	Master in industrial science in electronics/ICT		
	Master in industrial science in electro-mechanics		
	Master in industrial science in electro-technology		
Food Science and technology	ERASMUS MUNDUS master course “European Msc. in Food Science, Technology and nutrition”		Campus Rabot

**Campus
Dirk Martens**

Kwalestraat 92-94
9320 Aalst
Tel. 053/72 71 70
Fax. 053/72 71 00
Email. aalst@kahosl.be

**Campus
Waas**

Hospitaalstraat 23
9100 Sint-Niklaas
Tel. 03/776 43 48
Fax. 03/766 34 62
email. info.waas@kahosl.be

**Campus
Rabot**

Gebr. Demetstraat 1
9000 Gent
Tel. 09/265 86 10
Fax. 09/225 62 69
email. info.rabot@kahosl.be

4 KaHo Sint-Lieven:

more than education

Offering a detailed description of all facilities which are offered to students and staff on the different campuses would lead too far. Each course programme is extensively dealt with in its proper brochure, describing the infrastructure, laboratories and student facilities.

4.1 SERVICES

The mission statement of KaHo Sint-Lieven mentions three strategic objectives :

- to offer qualitative higher education,
- to organise services to society and
- to carry out applied research projects.

The curriculum and course innovation service (DOO) coordinates a multitude of initiatives and services, both for internal and external customers.

The quality assurance system of KaHo Sint-Lieven is coordinated by this service

Moreover, the curriculum and course development service wants to offer students and staff the possibility to integrate new technologies in their educational practice. It also promotes initiatives and projects in the field of lifelong learning.

To reach this aim, the DOO has set up numerous national and international projects.

The social service of KaHo Sint-Lieven provides facilities for students:

- **Collective facilities :**
sports and cultural activities (sport competitions like football, badminton, volleyball, workshops, reduction tickets for theatres....) organisation of student cafeterias , accommodation for incoming students, etc.
- **Individual services :**
Psychological and social counselling for students, study financing

4.2 RESEARCH

Different groups in KaHo Sint-Lieven develop research activities. This research is funded by own financial means, granted by several national (such as the "IWT-fonds") and international funds (such as the EU 6th framework programmes for research) or paid by companies.

Two spin-off non-profit organisations of KaHo Sint-Lieven are active on the campus Rabot ,vzw CBOK (www.cbok.be) and vzw KIHOU Bouw (www.kahosl.be/R&D).

The following list of research topics at KaHo Sint-Lieven is not exhaustive, but an indication of the existing specialities in research fields.

4.2.1 PROJECT BASED RESEARCH IN BACHELOR PROGRAMMES

The Flemish Government has set up funding for applied research projects in professional bachelor study programmes. Since 2004, there is an annual call for proposals for projects and KaHo Sint-Lieven is actively participating with a long list of realised projects.

Some examples (this list is not exhaustive)

- In chemistry/biochemistry: research into the influence of additives on the stability of beer
- In agro-and biotechnology: research into the reduction of the use of caesarean sections for the Belgian White-Blue cows
- In electrotechnology: research into the "profinet" system which allows for smoother processes in companies
- In production technology: how to carry out scientific mechanical tests on materials
- In nursing: how to integrate elderly psychiatric patients into retirement homes
- In biomedical laboratory technology: research into the genetic identity of foods
- In teacher training: how to prepare future teachers for an inclusive setting in their educational practice

4.2.2. RESEARCH IN THE INDUSTRIAL ENGINEERING DEPARTMENT

In the last years the Industrial Engineering Department has been streamlining its research activities, paying attention to its strategic aims for underpinning its academic education in technology with corresponding research activities targeting on innovative technology and industrial application.

To guarantee the research outcomes' quality we are limiting the number of research target areas and we are building larger research teams and laboratories, disposing of an appropriate capacity in knowledge and technology. In this way we want to offer professionalism and continuity to the educational system and to our partners in industry.

Today, eight research groups are active, largely corresponding to each of the Master training areas, and contributing to the main tasks of KaHo Sint-Lieven: education, research and service to society.

Electronics Research Group

The main research domains are the study of standards and systems for wireless and mobile communication, the search for error-free and secure transmissions, the implementation of existing standards in practical implementations and the development of new applications. Also the reduction of power consumption and the efficiency of wireless systems, are hot topics.

Research is done by the members of the DraMCo (Draadloze en Mobiele Communicatie - Wireless and Mobile Communication) research group. This young group includes six members; three of them have started their PhD research.

With the help of IWT (Flanders' Institute for Research and Technology) research projects are elaborated in: error correction in wireless communication systems; the development and evaluation of embedded applications for wireless, short-distance data exchange, using existing standards; location-dependent services and wireless technology for positioning applications.

*Contact: Lieven De Strycker, head of the research group (Lieven.Destrycker@kahosl.be)
Jean-Pierre Goemaere, project mentor (Jeanpierre.Goemaere@kahosl.be).*

Information Technology Research Group

About ten years ago, the IT group started carrying out research in the domain of automated decision support, planning and scheduling. Novel optimisation techniques are the key technologies that are being investigated. The IT group is involved in research projects with industrial partners which look at solving complex real world scheduling problems: transport scheduling, production scheduling, airline scheduling, timetabling, etc. Practical applicability of the results is an important research goal of the group. The models and algorithms for automated personnel rostering, for example, are currently being commercialised by Flemish software companies.

The second research domain involves software applications for mobile devices and embedded systems. Difficulties arise when devices have a small footprint, limited capacity or a strongly varying connectivity. The IT group has developed a multi agent based application framework to support software development for systems with mobile devices.

Across both research domains, semantic web technology and multi agent systems were applied. Especially the latter form a strong mechanism to model distributed systems while paying sufficient attention to privacy issues of the parties that are represented by the agents.

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Electricity and Automation Research Group

Based on a tradition of intensive cooperation and project elaboration with industry, the group Electricity and Automation develops research activities in “Electrical energy management” and “Intelligent control, modelling and simulation”. Both domains are supported by expertise and research activity in (statistical) data analysis.

“Electrical energy management” focuses on intelligent use of electric energy, modelling of medium voltage transmission lines and reliability analysis of electric equipment and installations.

Research projects strive, among others, to minimize the electricity bill of low tension customers (domestic consumers, small enterprises) by installing a battery buffer. The buffer is loaded during the night, coupled with renewable energy suppliers and used both as electric energy supplier during the day and as uninterruptible power supply.

Doctoral research currently focuses on electric energy management in EPAC’s (Electric Power Assisted Cycles). An optimal algorithm is developed in order to control the energy use of an added battery.

“Intelligent control, modelling and simulation” combines mainly (modern) control engineering, electrical drive technology, industrial IT, machine vision, physical modelling and system identification.

Research projects are set up and know how is developed in the broad area of process and factory automation. Typical topics are: simulation and optimization of torque-, speed-, position- and tension control loops, development and validation of models in web handling, interfacing with industrial data communication systems, sorting algorithms combined with digital image processing, stochastic modelling in control systems ... Doctoral research currently focuses on the development of advanced optimal algorithms for Model-based Predictive Control and their implementation and behaviour in a process control environment.

Contact: Gilbert Verhiest – gilbert.verhiest@kahosl.be

Laboratory for Light and Lighting Technology

Thanks to funding by the Flemish Government (IWT) and research projects in close cooperation with Flemish industry, the “Laboratorium voor Lichttechnologie” was founded in 1997.



The main research items are optical characterization of light sources, especially power LEDs (spectral intensity, spectral radiance, light distribution patterns, colour and colour temperature), optical characterization of materials (specular and diffuse reflectance and transmittance, spectral BRDF), design of efficient lighting fixtures using ray-tracing software, lighting calculations, criteria for efficient lighting and research on solar cells and stand-alone PV systems.

The laboratory is equipped with the appropriate measurement equipment and is an active member in CIE (Commission Internationale de l’Eclairage – International Commission on Illumination).

Contact: Peter Hanselaer – Peter.Hanselaer@kahosl.be – www.lichttechnologie.be

Electromechanical Engineering Research Group

The department of electromechanical engineering trains young engineers in the broad field of material engineering, prototyping and machine construction, energy conversion and automation, metrology and quality control, etc. This department is subdivided into 3 research groups which focus on finite element simulations, energy conversion and geometrical measuring techniques.

The Finite Element group is involved in a large number of industrial collaboration projects with small and larger companies and solves problems in a broad domain including the usual stress calculations but also more advanced problems of thermomechanical nature, plastic deformation of solids, crash simulations etc.

PhD students are also working on topics like material identification by inverse methods, digital image correlation techniques and new joining methods for steel plate.

Research in the Automation and Energy Conversion group focuses on three fields. Hydraulics is a first field where the main issues are the development of adequate drive mechanisms for the agricultural and processing industry, and the search for biodegradable hydraulic fluids starting from plain vegetable oils. A second field concentrates on engine developments like the use of renewable energy sources in cars and cogeneration plants. The third field deals with motion varying from vibrations analysis and generation in machines to identification and control of machine movements (e.g. laser cutting machines).

The group that focuses on metrology is mainly involved in applying inverse methods to a number of problems in which the original geometry of an object cannot be measured directly. Two examples of practical interest are objects that deform under their own weight when placed on the measuring device (e.g. certain rubber parts) and objects that are measured while being hotter than room temperature and, consequently, experience thermal deformations. By combining experimental measurements with finite element simulations of the object involved in an inverse method, we can gain more information on the original (undeformed) geometry of the object.

Contact: Dimitri Debruyne – dimitri.debruyne@kahosl.be

Chemistry Research Group

In this department research is concentrated around three main topics:

Environmental technology

One of the research topics within the Department of Chemistry concerns the environmental aspects of galvanic and other metal-using industries. On the one hand, 'Best Available Techniques' are implemented in existing processes concerning metal removal and reuse of waters. On the other hand, novel technologies such as supported liquid membranes and hybrid technologies concerning electro dialysis and ion exchangers are developed.

Galvanic technology

The goal of the research group on 'Surface Treatment' is to give practical support and advice to the plating industry. We dispose of a fully equipped pilot scale galvanic plant and a smaller installation for plating on plastics. The subjects treated involve not only classical plating processes but also modern plating processes such as plating on aluminum or magnesium or on non-conductive materials and depositions out of ionic liquids. The pilot plant is ideal for hands-on trainings in plating techniques.

The Laboratory for Flavour Research is specialized in sensory and chemical-analytical flavour characterisation of food products. The objectives are to explore the chemical background of the flavour of food and to gain insight into the flavour influencing parameters. The Laboratory for Flavour Research has a sensory test room for sensory analysis of food products with sensory panels. But the core business of the laboratory is chemical-analytical aroma characterisation of all kind of food products using different aroma isolation techniques and gas chromatography-mass spectrometry (GC-MS). Other in-house techniques to explore the flavour of food are gas chromatography-sniffing (gas chromatography-olfactometry) and MS-based electronic nose technology.

Applied and project-based research is performed in close cooperation with food companies. Besides bilateral (confidential) projects with the food industry many R&D projects, funded by the Flemish government through IWT-Flanders (Institute for the Promotion of Innovation by Science and Technology in Flanders), are performed to enhance product and process innovation in the food industry.

Contact: Eddy Courtijn – eddy.courtijn@kahosl.be



Biotech – Biochemistry and Biotechnology Research Group

Laboratory of Enzyme, Fermentation and Brewing Technology

A high flavour quality and especially flavour instability are major problems for every brewery. In this connection, the research of the brewing group of KaHo St.-Lieven is focused on:

- Beer flavour and flavour stability: detailed beer flavour characterization by analytical, sensorial, and multi-variate data analysis; evaluation of raw materials and process parameters in relation to beer flavour/flavour instability; implementation of reliable model systems to determine the degree of flavour deterioration on beer storage; development and implementation of novel anti-oxidative beer production systems to enhance flavour quality and flavour stability; quality improvement of existing brands and development of new beers with improved sensory properties and prolonged flavour stability.
- High-tech hopping, i.e. the development and application of highly enriched hop fractions based on bitter acids, hop aromas, and hop polyphenols, respectively, in order to impart refined hop characters to beer, combined with prolonged flavour stability.
- Special research activities: controlled mixed fermentation of lambic/geuze beers; enzyme Technology: including the study of pro- and anti-oxidative enzymes in malt and during the brewing process, the characterization of non-starch polysaccharides (NSP) and application of enzymes in food production, particularly NSP-hydrolysing enzymes (glucanases, xylanases); fermentation Technology: liquid-, solid state fermentation and functionality of filamentous fungi.

For these research projects the Biotech group disposes of a well-equipped pilot plant brewery and pilot scale fermentation plant and research labs.

Laboratory for Food Chemistry and Meat Technology

Practically all research is concentrated around :

- The processing of meat products: e.g. development of new meat products, implementation of new production techniques, mathematical modelling of heating – drying and salting, fermentation of meat products, climatization of production rooms
- The functionality of raw materials, ingredients and additives: e.g. technological properties of hydrocolloids (proteins, starches, alginates, carageenans,...) in relation to fat and water binding in meat products
- Chemical and bacteriological safety of meat products: e.g. use of natural preservatives for improving the keeping quality of heated meat products, evolving new techniques for colour formation in cured products, remediation of the presence of N-nitrosamines in foods, especially meat products

To achieve these objectives the Laboratory of Food Chemistry and Meat Technology disposes of a broad range of physicochemical, (bio)chemical, microbiological and analytical laboratory equipment.

Contact: Guido Aerts – guido.aerts@kahosl.be

Construction and Surveying Research Group

The fields of study with corresponding research topics are:

- Concrete technology (contact: peter.minne@kahosl.be): mix design of concrete mixtures, quality control of concrete, modelling of concrete properties
- Building physics (contact: hilde.breesch@kahosl.be): commissioning of low energy buildings, low energy ventilation and cooling in office buildings
- Geomatics – Surveying (contact: guido.kips@kahosl.be): CAD-GIS and large scale reference databases (GRB), exchange standards for utility data (KLIMOP)
- Laserscanning- 3D-modelling (contact: mario.santana@kahosl.be)
- Structural mechanics – Dynamics (contact: peter.vandenbroeck@kahosl.be): footfall induced floor vibrations: prediction and measurement, experimental modal analysis, educational tools (LabView – Matlab)

*Contact: Peter Vandenbrouck – peter.vandenbrouck@kahosl.be
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4.3 KaHo Sint-Lieven International

Academic staff at KaHo Sint-Lieven have numerous international contacts with companies, universities and associations all over the world. Apart from these individual contacts, KaHo Sint-Lieven wants to conduct a strategic policy of active participation in European Union programmes.

The roots of the European commitment go back to 1989. The first steps which were taken then in the "Erasmus-experience" have now developed into a major network of projects and exchanges with more than 80 universities and organisations in and out of the EU. The small team of pioneers has been expanded by dozens of cooperating staff in the different departments of KaHo Sint-Lieven.

Student and staff exchanges have now spread into all study fields and have been fully integrated into the regular curricula.

The recognition of all study activities abroad takes place via ECTS (European Credit Transfer System), which was implemented in KaHo Sint-Lieven as early as 1996-1997.

In KaHo Sint-Lieven, the ECTS project has been integrated into the total quality project: the activities to be performed under ECTS involve explicit aims and objectives, transparency in curriculum and examination systems, descriptions of course units etc.

In addition to mobility activities such as student and staff exchanges and intensive programmes, KaHo Sint-Lieven is very active in curriculum development projects via European programmes. In the past decennium, numerous projects in Tempus, Socrates (Lingua, ODL, Grundtvig, Comenius, Minerva...), Leonardo da Vinci, European Social Fund (Adapt) have yielded important results in educational innovation.

Any information about these projects can be obtained at the international relations office (see below).

Since 2005, KaHo Sint-Lieven offers an Erasmus Mundus Master course in English, "SEFOTECH.NUT, Msc. in Food science, Technology and Nutrition".

More information on this English master course is available on www.sefotechnut.org or via info@sefotechnut.org

Many of the European partner institutions of KaHo Sint-Lieven have joined forces in several networks:

The Florence network is an organisation of 34 institutions of higher education and universities in 16 countries in Europe, and specifically for nursing and midwifery. They cooperate on pedagogic, scientific and didactic topics. The aim of the network is to exchange students and teachers, to compare curricula, to develop research projects and to organise intensive courses and curriculum development projects.

<http://www.florence-network.info>

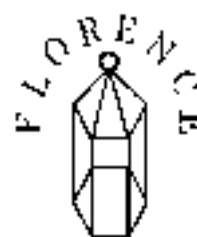
In 2000 about 15 of the European partner institutions in the engineering department of KaHo Sint-Lieven, have established the **EUCLIDES network**, which is coordinated by KaHo Sint-Lieven. Information on the members and the activities of the EUCLIDES network can be found on the website of the network: www.euclides.fh-aalen.de



SEFOTECH.NUT

info@sefotechnut.org

www.sefotechnut.org



Applications for student and staff mobility to KaHo Sint-Lieven

Students and staff planning an exchange to KaHo Sint-Lieven can do this through one of the international coordinators in each department, or they can send their application to the central international office at the below address.

The part on "Practical Information", further on in this brochure, will provide an answer to the basic questions concerning applications and arrival.

International Relations Office KaHo Sint-Lieven

Gebr. Desmetstraat 1 9000 Gent

Tel. 09/265 86 45 - Fax. 09/265 86 46

Email. euro@kahosl.be

www.kahosl.be/english

4.4 Postgraduate education

A variety of postgraduate activities exists on our campuses, ranging from complete postgraduate programmes to guest lectures and courses for external customers.

Continued Education Programmes and postgraduate trainings :

- *Graded programmes leading to an additional degree*
Postgraduate programme Intensive care and emergency care (Bachelor)
- *Postgraduate trainings leading to a certificate*
In the different study fields , a long list of shorter postgraduate training courses have been developed throughout the years. Some examples are :
 - Postgraduate training for safety and health advisors - Level 1 and 2
 - Postgraduate training for environmental coordinators - Level A and B
 - Supplementary training for safety coordinators for mobile and temporary building sites - Level A and B
 - Safety and environmental care
 - Management in the health care and welfare sector
 - Urgent medical care for beginners
 - Radioprotection , nuclear treatment and radio therapy
 - Oncological care
 - First aid in companies
 - Diabetes treatment in primary health care
 - Facility management
 - Animal Behaviour

If you are interested you can find more information at the service centre of postgraduate education or on the KaHo Sint-Lieven website

KaHo Sint-Lieven postgraduate course centre:

tel. 09/265 86 18

fax 09/265 86 25

e-mail dvo@kahosl.be

website : <http://dvo.kahosl.be>

Admission to higher education in Flanders

Admission for students to the regular study programmes

Candidates should possess a certified higher secondary school diploma or a certificate which has been acknowledged of equal value according to a specific act, decree, European directive, bilateral agreement or international agreement. At the moment of registration, only a valid identity card or passport is required. At the start of the academic year the additional documents need to be produced (passport photos, diploma of higher secondary school, excerpts from the birth certificate, proof of Dutch language knowledge).

All educational activities take place in Dutch. Hence, a knowledge of the Dutch language is essential to take courses and examinations. Therefore all non-Belgian students are required to produce proof of sufficient language knowledge. For detailed information concerning entry requirements and tuition fees students can contact info@kahosl.be

Admission for students under student mobility programmes

Exchange students who come to KaHo Sint-Lieven with European mobility programmes do not have to pay any admission fees. The practical laboratory work, final project work or practical placements for these students can be supervised in English or French. Nevertheless, students are encouraged to take a Dutch language course before or at the start of their exchange period (introduction courses are offered twice a year at the beginning of each semester).

Academic Calendar

The academic year in KaHo Sint-Lieven is organised in 2 semesters. The first semester starts on the last but one Monday of September, and is concluded by an examination session at the end of January. .

The second semester runs from the beginning of February onward, and is again concluded by an examination session in June. There are 2 major breaks: one at Christmas and one at Easter. There are 2 official examination periods: the first ends in June, the second ends on the last but one Monday of September.

Students or visitors should take into account the public holidays in Belgium :

- New Year's Day (1st January)
- Labour Day (1st May)
- Whitsunday and Monday (10 days after Ascension day)
- Belgian National Day (July 21st)
- Armistice Day (November 11th)
- Boxing Day (December 26th)
- Easter Sunday and Monday
- Ascension Day (39th day after Easter)
- Flemish National Day (July 11th)
- All Saint's Day (November 1st)
- Christmas Day (December 25th)

Cost of living and studying

The below figures try to give an estimate of the cost of living and studying in Flanders, although subsistence costs can vary substantially according to the personal life style of students. Accommodation prices are about €220 for a private student room with shared kitchen and bathroom. Students who wish to come to KaHo Sint-Lieven on a student exchange are requested to inform the international office well in advance. They will inform the accommodation office, who will then organise a student room for the incoming students. Course and study materials differ in price depending on the field of study, with a price of €0,05 per photocopy. Each KaHo Sint-Lieven campus has a cafeteria which offers drinks and cold or warm meals at democratic prices (about €5 for a warm meal).

Health care and insurance

EU staff and students need to check with their local medical insurance office about forms needed. For Belgium, a European insurance card, E111 or E128 forms offer sufficient medical coverage and it is not needed to take any additional insurances. For non-EU staff and students these document do not apply. They need to conclude a private insurance to cover medical and personal risks. The Belgian health care system operates on a refund basis: customers first pay for the consultation and then later recover a substantial part through the health insurance fund.

Arrival procedures

EU staff and students only need their national identity card or passport to stay in Belgium. Non-EU staff and students generally need a visa for exchanges longer than 3 months. It is recommended to consult the Belgian Embassy in the country involved some time before your departure. Upon their arrival, incoming students have to register at the town where they study (Gent, Aalst or Sint-Niklaas). They should go to the "Foreigner's registration office" at the City Hall to declare their arrival and to give the address where they live. For this registration students need a valid identity card, passport or visa (if applicable), proof of medical insurance, 4 passport photographs and a signed declaration that they are studying at KaHo Sint-Lieven (this is provided by the international office upon arrival).

The registrations offices are :

- In Gent : Bevolkingsdienst, Afdeling Vreemdelingen, W. Wilsonplein – 9000 Gent - Tel. 09/ 266 71 50
- In Aalst : Dienst bevolking , Grote Markt 1 – 9300 Aalst - Tel. 053/73 22 53
- In Sint-Niklaas : Dienst Bevolking, Grote Markt 1 – 9100 Sint-Niklaas - Tel. 03/760 91 26

Recreation

Each KaHo Sint-Lieven campus has its own student clubs which organise activities ranging from cantuses, film evenings, excursions etc. You can receive information about their activities from the local international coordinator. In the regions of Gent, Aalst en Sint-Niklaas cultural activities and timetables of cinemas are available in the regional press. All films in Flemish cinemas are presented in the original language with Dutch subtitles. In Gent, the Erasmus Student Network organises all kinds of cultural and sport activities for foreign students (email. esn.info@email.com).

Tourist information about the region and the city is available at the local Tourist Office.

Gent	Dienst Toerisme - Crypte van het Stadhuis - Botermarkt - 9000 Gent Tel. +32 9/266 52 32 or 224 15 55 – email. toerisme@gent.be www.gent.be
Aalst	Infokantoor Toerisme - Grote Markt 35a - 9300 Aalst Tel. +32 53 71 07 46 www.aalst.be
Sint-Niklaas	Toeristisch Infokantoor - Grote Markt 45 - 9100 Sint-Niklaas Tel. +32 3/777 26 81 or 777 27 04 www.sint-niklaas.be



6 Facts and Figures

Land area:

Flanders: 13 512 km²
Belgium: 30 518 km²

3 official languages:

Dutch
French
German

Distances from Brussels (by road)

Amsterdam	210 km
Düsseldorf	270 km
London	390 km
Luxembourg	221 km
Paris	250 km

Measures:

The European continental meter, litre and kilo

Climate:

temperate maritime, with relatively mild winters, whilst the sea influences summer temperatures (20°).
Rainfall throughout the year.

Money and banking:

the euro is the currency since 2000.
Most hotels, restaurants and shops accept international credit cards (VISA, American Express, Diner's etc).
Cash money can be changed at banks and exchange offices.
The easiest way of transferring money from abroad however, is to open a bank account in Belgium.

Emergency Phone numbers :

100 and 112: Ambulance + Fire Brigade
101: Police
02/345 45 45: Anti-poison centre





<http://associatie.kuleuven.be>

KaHo Sint-Lieven

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