FACULTY OF
BIOSCIENCE ENGINEERING

EXCELLENCE IN RESEARCH-DRIVEN EDUCATION

Leading faculty in Europe in international education programmes related to life sciences, biological, physical and chemical sciences, with more than 40 years of experience in international cooperation.

3,000 STUDENTS

- 1,100 Bioscience Engineering students
- 640 Engineering Technology students
- More than 500 international students

1,200 EMPLOYEES

- 150 professors
- 1,000 academics

4 EDUCATION CAMPUSES

- Campus Coupure (Gent, Belgium)
- Campus Schoonmeersen (Gent, Belgium)
- Campus Kortrijk (Kortrijk, Belgium)
- Ghent University Global Campus (Incheon, South Korea)

6 RESEARCH CAMPUSES

- Bottelare
- CAPTURE
- Gontrode
- Melle
- Ostend Science Park
- Proeftuin

RANKING

TOP 50 2021 Agriculture Forestry QS WORLD UNIVERSITY RANKINGS BY SUBJECT

TOP 100 2021 Biological Sciences QS WORLD UNIVERSITY RANKINGS BY SUBJECT

TOP 100 2021 Engineering Chemical QS WORLD UNIVERSITY RANKINGS BY SUBJECT

TOP 100 2021 Environmental Sciences QS WORLD UNIVERSITY RANKINGS BY SUBJECT

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8 DEPARTMENTS

- Environment
- Plants and crops
- Animal sciences and aquatic ecology
- Food technology, safety and health
- Green chemistry and technology
- Biotechnology
- Data analysis and mathematical modelling
- Agricultural economics

CONTACT

Dean's office: administratiefsecretaris.fbw@ugent.be

Education services: fsa.fbw@ugent.be

Research services: onderzoek.fbw@ugent.be

International services: itc@ugent.be

PR & communication services: communicatie.fbw@ugent.be

Logistics services: logistiek.fbw@ugent.be

ugent.be/bw

Faculteit Bio-ingenieurswetenschappen UGent

@fbwUGent

Faculty of Bioscience Engineering

FACULTY OF
BIOSCIENCE ENGINEERING

EDUCATION

The offer of study programmes at our faculty is as diverse as our focal research topic: the living matter.

Academic programmes are organised according to the European academic system:

- 3-year Bachelor programmes
- 1- or 2-year Master programmes (optionally followed by 1-year advanced masters)
- PhD in Applied Biological sciences (including a PhD training programme in one of the Doctoral Schools).

BACHELOR

Campus Coupure (Gent)

Bachelor of Science in Bioscience Engineering:

- Agricultural Sciences
- Cell and Gene Biotechnology
- Chemistry and Food Technology
- Environmental Technology
- Forest and Nature Management
- Land, Water and Climate Management

Campus Schoonmeersen (Gent)

Bachelor of Science in Bioscience Engineering Technology

Campus Kortrijk

Bachelor of Science in Bioindustrial Sciences

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MASTER

Campus Coupure (Gent)

Master of Science in Bioscience Engineering:
- Agricultural Sciences
- Cell and Gene Biotechnology
- Chemistry and Bioprocess Technology
- Environmental Technology
- Forest and Nature Management
- Food Science and Nutrition
- Land, Water and Climate Management

Master of Science in Bioinformatics:
- Bioscience Engineering

International Master of Science (Erasmus Mundus):
- Environmental Technology and Engineering
- Health Management in Aquaculture
- Rural Development
- Soils and Global Change
- Sustainable and Innovative Natural Resource Management

Master of Science in
- Aquaculture
- Environmental Science and Technology
- Food Technology
- Nutrition and Rural Development
- Sustainable Land Management

Campus Schoonmeersen (Gent)

Master of Science in Bioscience Engineering Technology:
- Agriculture and Horticulture
- Food Industry

Master of Science in Biochemical Engineering Technology

Campus Kortrijk

Master of Science in Bioindustrial Sciences:
- Circular bioprocess technology

Advanced Master of Science:
- Sustainable Food Packaging

SHORT COURSES

- BePreP: **preparatory course** for new international master students at the faculty of Bioscience Engineering
- A variety of **summer schools** (e.g. 'Sustainability in the Agro-Food Chain')

GLOBAL CAMPUS

We are also involved in three Bachelor programmes at the Ghent University Global Campus in Incheon, South Korea.

Bachelor of Science in:
- Environmental Technology
- Food Technology
- Molecular Biotechnology

FACULTY OF
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RESEARCH

Ghent University has been ranked in the top 50 of the QS World University Ranking for the subject Agriculture & Forestry, and in the top 100 for the subjects Biological Sciences, Environmental Sciences and Chemical Engineering.

- Collaborations with more than 300 organisations, 20 spin-offs
- Research expenditures per year: more than 30 million euros
- 1,000 researchers
- 850 A1 publications per year
- 100 PhDs per year

IMAGINE WHAT WE CAN DO TO TACKLE GLOBAL CHALLENGES

- Scan soils and forests to achieve food security and protect the environment.
- Brew beer from recycled water.
- Design food packaging sensors for healthy living and less food waste.
- Transform waste energy with a chemical heat pump.
- Rethink and retool economic, social, and environmental policies to promote sustainable economic growth.
- Measure effects of microplastics in oceans and seafood to protect human health and conserve marine resources.
- Identify accurate biomarkers to develop diagnostics and targeted therapies in the field of oncology, HIV and ageing diseases.
- Find solutions to all data-related concerns.

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- Green chemistry and technology
- Biotechnology
- Data analysis and mathematical modelling
- Agricultural economics

DEVELOPMENT COOPERATION

We rely on a long tradition of international cooperation with partners from all over the world.

Our researchers travel the world to support academic development.

WHAT WE CAN DO FOR YOU

- Solve complex research questions in a multidisciplinary manner
- Provide scientific advice
- Valorise data
- Organise training on demand in diverse disciplines

CONTACT

onderzoek.fbw@ugent.be

ugent.be/bw/en/research

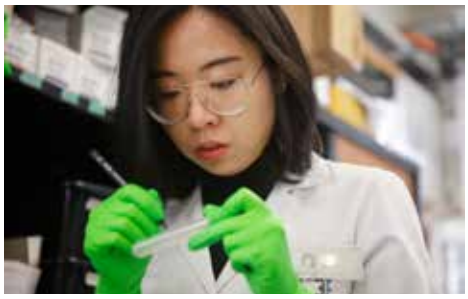
FACULTY OF
BIOSCIENCE ENGINEERING

INTERNATIONALISATION

- 200 exchange students, 200 international graduate students and 400 international PhD students
- Students of more than 100 different nationalities

PARTNERS

More than 160 cooperation partners for exchange programmes, research cooperation, staff mobility, PhD programmes, internships and master dissertations



SUPPORT AND COOPERATION

- Guidance in application procedures
- Support of international PhD students before and upon arrival
- International alumni network
- International student recruitment
- Negotiation of institutional agreements
- Negotiation of funding agreements with funding agencies worldwide
- Building of international consortia

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CONTACT

International Training Centre

itc@ugent.be
+32 9 264 61 00

KNOWLEDGE TRANSFER

Knowledge transfer centres facilitate our researchers to connect to innovating communities, to collaborate and find out about new opportunities in key research and technology sectors.

- Our knowledge transfer centres **improve business performance** through innovation and new collaborations by driving the flow of people, knowledge and experience between business and the science-base;
- They drive **knowledge transfer between the supply and demand sides** through a high quality, easy to use servicepoint;
- They provide the opportunity to **meet and network** with individuals and organisations, nationally and internationally.

Agrolink Flanders
Flemish agricultural research organisations
Contact: pieter.spanoghe@ugent.be

Biomarked
Pre-clinical translational research applications and bio-IT in cancer and ageing
Contact: daisy.flamez@ugent.be

Biomolecules
Production of biobased molecules and engineering tools
Contact: nele.ameloot@ugent.be

BLUEGent
Innovations in aquaculture and blue life sciences
Contact: margriet.drouillon@ugent.be

CAPTURE
Research, training and knowledge transfer of resources in water, conversion of CO_2 to products and plastics to resources
Contact: korneel.rabaey@ugent.be

Cel begeleiding karkas identificatie
Classification of bovine and pig carcases in Flemish slaughterhouses
Contact: stefaan.desmet@ugent.be

Centre for Environmental Science & Technology
Prevention of environmental pollution, remediation of environmental problems and waste management
Contact: Karel.deschamphelaere@ugent.be

CleanChem
Sustainable chemical technologies
Contact: stijn.dekeukeleire@ugent.be

Cropfit
Biostimulants in plants, biopesticides
Contact: maaike.perneel@ugent.be

End-of-Waste
Creating value out of organic waste and residues
Contact: nathan.degeyter@ugent.be

Expertise and Service Centre for water technology
Improvement of production, treatment and management of waste water
Contact: stijn.vanhulle@ugent.be

Flemish cluster in predictive microbiology in food
Training, advisory and consultancy service in predictive microbiology
Contact: frank.devlieghere@ugent.be

Food2Know
The production of safe and healthy food
Contact: koen.dewettinck@ugent.be

Ghent University Stable Isotope Facility
State of the art stable isotope analyses and consulting
Contact: pascal.boeckx@ugent.be

Green Chemistry Ghent
Better and safer chemicals supporting green growth
Contact: chris.stevens@ugent.be

i-Know
Intelligent information management
Contact: ljiljana.platisa@ugent.be

International Plant Biotechnology Outreach
Capacity building in the South
Contact: godelieve.gheysen@ugent.be

Marine@UGent centre of excellence
Marine research and technological innovation
Contact: colin.janssen@ugent.be

Pack4Food
Innovation in food packaging
Contact: an.vermeulen@ugent.be

Provaxs
Innovation in Animal Health
Contact: daisy.vanrompay@ugent.be

Resource Recovery Technology Consortium
Business platform on resources from water within CAPTURE
Contact: jan.arends@ugent.be

Sensolab
Consumer sensory research
Contact: xavier.gellynck@ugent.be & koen.dewettinck@ugent.be

VEG-i-TEC
Innovating the processing of vegetables and potatoes and the use of its side streams
Contact: imca.sampers@ugent.be

CONTACT

hilde.willekens@ugent.be

ugent.be/bw/en/research

FACULTY OF
BIOSCIENCE ENGINEERING

DEPARTMENT OF ENVIRONMENT

Pioneering research to better understand, map, value, and manage the world's natural resources, combined with high-quality education programmes in natural resource management.

TOPICS

- Impacts of global change on ecosystems
- Bioeconomy, ecosystem services and nature-based solutions
- Ecosystem resilience
- Multidisciplinary and interdisciplinary research

IMPACT

- Independent, critical voice through the Natural Capital Research Platform
- Generating awareness on the preservation and management of natural resources

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CONTACT

ugent.be/bw/environment

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ACADEMIC STAFF

Lander Baeten	Conservation and ecological restoration
Kim Calders	Laser scanning, earth observation, terrestrial ecology
Wim Cornelis	Soil physics, soil water management, soil quality, water and soil conservation
Pieter De Frenne	General and applied botany, climate change, global change, biodiversity, agroecology
Stefaan De Neve	Soil fertility, soil quality, organic agriculture
Philippe De Smedt	Soil and environmental geophysics
Peter Finke	Modelling of soil formation under global change, geostatistical (soil) mapping, landscape reconstruction
Wannes Hubau	Tropical forest ecology, carbon balance, wood anatomy, vegetation history, palaeoecology
Jan Mertens	Ecological restoration, heavy metals in (forest) ecosystems, management of urban green spaces
Diego Miralles	Global hydrology, ecohydrology, land-atmosphere feedbacks, climate extremes
Abdul Mouazen	Precision agriculture and environmental systems engineering
Steven Sleutel	Management of organic matter in agro-ecosystems, biogeochemistry of soil, soil greenhouse gas emissions
Joris Van Acker	Wood biology and technology: forestry-wood chain
Frieke Vancoillie	Remote sensing and GIS
Jan Van den Bulcke	Wood biology and technology: tree growth and wood formation
Ellen Van De Vijver	Soil contamination and remediation, urban soil, near-surface geophysics, geostatistics, spatial sampling design
Marc Van Meirvenne	Soil spatial inventory techniques
Hans Verbeeck	Terrestrial ecosystem ecology, vegetation modelling, carbon and water cycling in (tropical) forests, vegetation dynamics and biogeochemistry of forests, global change ecology, impacts of climate and land-use change
Ann Verdoodt	Soil degradation, soil quality, land evaluation, land-use management soil-information systems
Kris Verheyen	Forest ecology and management, biodiversity and ecosystem services, global change
Niko Verhoest	Hydrology and water management

FACULTY OF
BIOSCIENCE ENGINEERING

DEPARTMENT OF PLANTS AND CROPS

The Department of Plants and Crops acquires, creates, interprets and transfers biological, ecological and technological knowledge and expertise related to the sustainable (re)production of healthy, high-quality plants and crops.

TOPICS

- Production systems
- Breeding
- Ecophysiology
- Diseases, pests, weeds and their integrated management
- Applied entomology and acarology
- Biotechnology
- Monitoring and modelling

IMPACT

- Sustainable production of plants and crops for a wide array of end uses
- Training science-based plant and crop specialists with open, critical minds and engineers' attitudes

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CONTACT

ugent.be/bw/plants-and-crops

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ACADEMIC STAFF

Kris Audenaert	Plant pathology, mycology, mycotoxins, phytotoxins
Benny De Cauwer	Crop husbandry, weed science, integrated weed management
Patrick De Clercq	Entomology, acarology, biological and integrated control of crop pests
Eduardo de la Pena	Tropical and subtropical agriculture, crop protection, agrodiversity, agroecology
Danny Geelen	Plant research: in vitro biotechnology, breeding, propagation, sexual reproduction, space applications
Geert Haesaert	Crop production, plant breeding and crop protection, toxigenic fungi and mycotoxins
Monica Höfte	Plant pathology, molecular plant-pathogen interactions, biological and integrated control of plant diseases
Steven Maenhout	Agronomy: crop husbandry, grassland and ley-arable farming. Plant breeding: quantitative genetics, breeding methods and techniques, variety development and plant breeders' rights
Wouter Maes	Drone remote sensing, precision agriculture, hyperspectral and thermal imaging
Jan Pieters	Thermic processes, heat and mass transfer, energy, agricultural engineering
Dirk Reheul (until 30/09/2022)	Agronomy: crop husbandry, grassland and ley-arable farming. Plant breeding: methods and techniques, variety development, plant breeders' rights. Plant physiology and sustainable systems.
Guy Smagghe	Entomology, crop protection, novel insecticide mechanisms, insect biotechnology, RNA interference, risk assessment of pesticides, pollinators and pollination
Pieter Spanoghe	Formulation, application and analysis of pesticides, (side) effects of pesticides, exposure assessment of man and environment
Kathy Steppe	Ecophysiology, plant-water relations, carbon metabolism and respiration, plant monitoring and stress detection with plant sensors, plant modelling, development of plant-based control strategies, effects of climate change on the physiology of plants, trees and ecosystems
Luc Tirry	Agrozoology, entomology, acarology, insecticide resistance, integrated pest control of animal-noxious agents
Marie-Christine Van Labeke (until 30/09/2022)	Crop physiology, abiotic stress, light quality (LED) and plant response, sustainable production
Thomas Van Leeuwen	Molecular acarology and genomics, insecticide resistance, molecular mite-plant interactions, new insecticide target-sites
Stefaan Werbrouck	Horticulture, in vitro culture of plants (especially trees), in vitro breeding of plants

FACULTY OF
BIOSCIENCE ENGINEERING

DEPARTMENT OF ANIMAL SCIENCES AND AQUATIC ECOLOGY

Research, education, and services to society in relation to the various contributions of animals to human wellbeing (including the sustainable production of healthy food) and the evaluation of anthropogenic influence on the environment (in relation to its optimal and sustainable use).

TOPICS

- Animal production and biotechnology
- Feed and animal product quality
- Immunology and infection prevention in man and animal
- Aquaculture
- Aquatic ecology
- Environmental assessment
- Ecotoxicology

IMPACT

- Qualitative, safe and sustainable use of animals with a minimal impact on climate and environment
- Ecological assessment of man's impact on the environment, for sustainability policy purposes

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CONTACT

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ACADEMIC STAFF

Jana Asselman	Oceans and human health, molecular (eco)toxicology, environmental epigenomics marine biodiscovery
Peter Bossier	Microbiological and genetical aspects of the aquatic larviculture
Karel De Schamphelaere	Chemical stress ecology: combined effects of chemical substances, climate change and natural stress factors on populations and ecosystems, ecotoxicology, risk analysis of heavy metals in (aquatic) environment, ecological modelling of populations and ecosystems
Stefaan De Smet	Animal production systems, meat science, quality and nutritional value of animal products, animal breeding
Veerle Fievez	Ruminant nutrition, microbial digestive processes, livestock feed, monitoring digestive disorders
Dirk Fremaut	Livestock breeding, livestock feed, feed for domestic animals, livestock management
Peter Goethals	Monitoring, assessment, modelling and management of water systems
Colin Janssen	Ecotoxicology and applied marine ecology, oceans and human health
Joris Michiels	Nutrition of monogastrics, digestive physiology of pigs and poultry, weaning of piglets, gut microbiota, feed additives
Daisy Vanrompay	Immunology and animal biotechnology, biomedical research, vaccine design, novel antibiotics, bacterium-host cell interactions
Gilbert Van Stappen	Live food and larviculture aspects of aquaculture, aquaculture nutrition

FACULTY OF
BIOSCIENCE ENGINEERING

DEPARTMENT OF FOOD TECHNOLOGY, SAFETY AND HEALTH

Top-notch innovative research with an international reputation in food technology, food chemistry, food microbiology and human nutrition. The department stands for applied and fundamental, multifaceted research of high social relevance and (inter)national cooperation with food industry, competent authorities, consumer organisations and all food-chain stakeholders.

TOPICS

- Food technology
- Food chemistry
- Food microbiology
- Food packaging
- Nutrition and health

IMPACT

- To provide the consumer with tasty, safe and nutritious food.
- Interaction with different stakeholders: agri-food business and scientific community, government and NGOs.

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CONTACT

ugent.be/bw/foodscience

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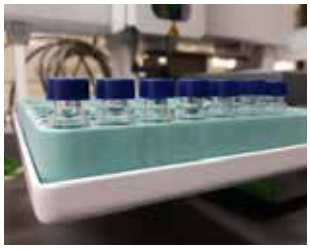
ACADEMIC STAFF

Tanja Cirkovic Velickovic	Food allergens, protein digestion, protein-ligand interactions in food systems
Bruno De Meulenaer	Food chemistry, chemical analysis of food products, chemical aspects of food safety
Frank Devlieghere	Food microbiology and preservation
Koen Dewettinck	Food processing and microstructural analysis
Mia Eeckhout	Cereal food and feed technology
Liesbeth Jacxsens	Quality assurance in agri-food chain, food safety management systems, HACCP, risk analysis, microbiological and chemical risk assessment
Patrick Kolsteren	Nutritional epidemiology, child nutrition
Carl Lachat	Nutritional epidemiology, nutrition and health, nutrition policy
Mahta Mirzaei	Protein Technology (Ghent University Global Campus)
Katleen Raes	Fermentation processes, enzymatic conversions, valorisation of by-products, fermented food, bioactive components
Peter Ragaert	Food-packaging technology
Andreja Rajkovic	Food safety, food microbiology, microbial toxins, virulence
Imca Sampers	Chemical and microbiological quality of food, irrigation and process water, risk assessment
Benedikt Sas	Innovation management in the agro-food industry, intellectual property and valorisation, R&D management, corporate management
Mieke Uyttendaele	Microbial analysis of food, food hygiene, microbial aspects of food safety, molecular techniques in food microbiology
Filip Van Bockstaele	Food microstructure and functionality - lipid science and technology
John Van Camp	Food science, human nutrition, nutrition and health
Sam Van Haute	Food technology and processes

FACULTY OF
BIOSCIENCE ENGINEERING

DEPARTMENT OF GREEN CHEMISTRY AND TECHNOLOGY

Internationally recognised research related to both fundamental and applied aspects of chemistry in the domain of bioscience engineering. Comprising advanced analysis, (bio)chemical as well as physicochemical conversion and treatment techniques, and sustainable process design.



TOPICS

- Advanced analytical chemistry and ultra-trace (high-resolution) mass spectrometry
- Applied ecochemistry with focus on trace elements, isotopes, and organic micropollutants
- Organic synthesis, use of renewable resources, bio-organic chemistry, microreactor technology
- Particle and interfacial technology
- Thermochemical biomass conversion
- Ecotechnology for air and water treatment and resource recovery
- Biosystems control
- Life cycle assessment and sustainable process design
- Catalysis

IMPACT

- Sustainable (re)use of biological raw material and natural resources
- Technological solutions, fit-for-use in different (industrial) and international contexts (e.g. developing countries)
- Expertise and services for SMEs and non-profit organisations for their water treatment and re-use

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CONTACT

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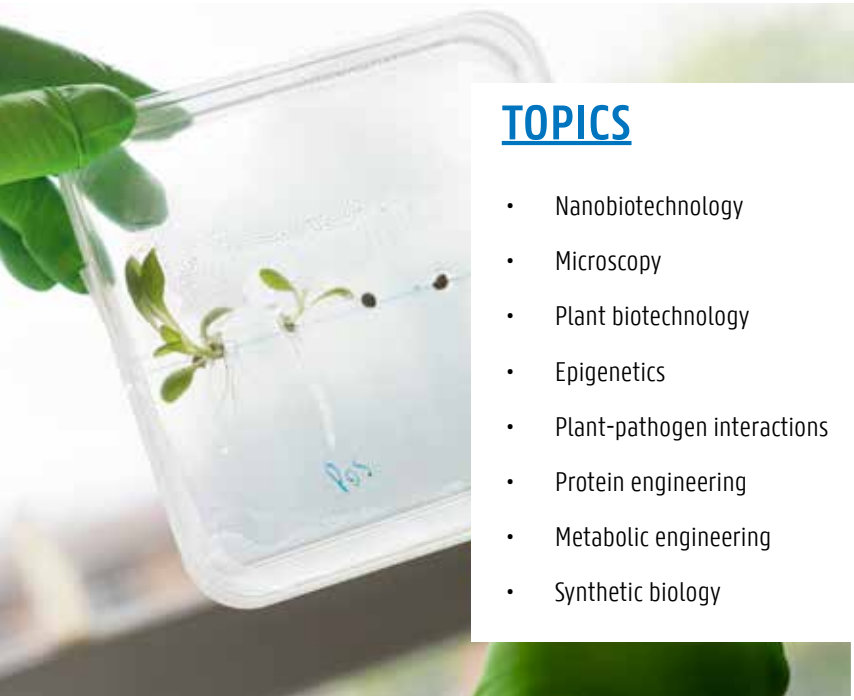
ACADEMIC STAFF

Pascal Boeckx	Analyses and application of isotopes in bioscience, tropical terrestrial ecosystems, greenhouse gas emissions and sinks
Marta Costas Rodriguez	Elemental and isotopic analysis in bioscience and archeology
Matthias D'hooghe	Organic and bioorganic chemistry, heterocyclic chemistry, synthesis of bioactive compounds
Kristof Demeestere	(Ultra-)trace analysis of organic compounds in ecosystems, emerging organic micropollutants in the aquatic environment, advanced oxidation processes and water treatment
Steven De Meester	Sustainable design of process chains, separation processes, downstream processing
Jo Dewulf	Environmental and clean technology
Gijs Du Laing	Analysis, chemistry and technology of trace elements in food and environment
Ann Dumoulin	Chemical analysis: water, environment, materials
Thomas Heugebaert	Photochemistry, flow reactor technology, organic synthesis
Philippe Heynderickx	Kinetics, heterogeneous catalysis, parameter estimation, environmental, mass spectrometric analysis, experiment-model-based analysis, organic chemistry, process engineering, environmental chemistry
Sven Mangelinckx	Chemistry of non-proteinogenic amino acids, azaheterocycles and natural products, isolation, analysis, synthesis and modification of bioactive natural products
Erik Meers	Environmental chemistry and technology for resource recovery in the agro-food value chain
Frederik Ronsse	Thermochemical biomass conversion, biochar production, processing techniques
Diederik Rousseau	Natural water treatment systems (algae ponds, constructed wetlands, etc.), water quality
Christian Stevens	Heterocyclic chemistry, aminophosphonate chemistry, micro-reactortechnology, chemical modification of renewable sources
Filip Tack	Biogeochemistry of trace elements, environmental impact of heavy metals, pollution of soil and sludge, chemical analysis
Paul Van der Meeren	Particle and interfacial technology
Stijn Van Hulle	Application of industrial water treatment (advanced) oxidation processes, LED H2O
Arne Verliefde	Water treatment: drinking and industrial water, physicochemical treatment of waste water
Pieter Vermeir	Nanotechnology: detection and characterisation, chemical analysis
Eveline Volcke	Biosystems control and design, environmental engineering, bioconversion processes
Christophe Walgraeve	Trace organic compounds (TrOCs) in ecosystems, environmental chemistry and technology, air pollution, air quality, volatile organic compounds, particulate matter, interspecies interactions, odor interference
Di Wu	Water and environmental biotechnology, resource recovery

FACULTY OF
BIOSCIENCE ENGINEERING

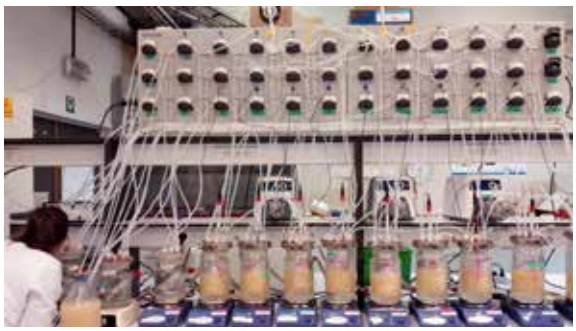
DEPARTMENT OF BIOTECHNOLOGY

Innovation through molecular characterisation and optimisation of biological systems enabling agricultural, culinary, environmental and medical applications.



TOPICS

- Nanobiotechnology
- Microscopy
- Plant biotechnology
- Epigenetics
- Plant-pathogen interactions
- Protein engineering
- Metabolic engineering
- Synthetic biology
- Industrial biotechnology
- Microbial production and recovery of resources
- Brewing and fermentation technology
- Biological water treatment
- Microbe-host interactions
- Microbial ecology



IMPACT

Optimising biological systems for sustainable production and human health

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CONTACT

ugent.be/bw/biotechnology

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ACADEMIC STAFF

Nico Boon	Microbial community engineering, molecular and optical fingerprinting of microbial communities, drinking water microbiology, bioremediation
Yves Briers	Enzyme engineering, industrial biotechnology, medical biotechnology
Jessika De Clippeleer	Brewing technology, fermentation, raw materials, beer (flavour) quality and stability
Tom Defoirdt	Management of bacterial activity, abatement of bacterial diseases, antivirulence therapy, aquatic microbiology, blue biotechnology
Leen De Gelder	Environmental biotechnology, applied microbiology
Bart De Gusseme	Biological waste-water treatment, drinking water production and disinfection microbial reuse technology
Marjan De Mey	Industrial biotechnology, metabolic engineering, synthetic biology
Jo De Vrieze	Anaerobic digestion, resource recovery, microbial 3D engineering, microbial ecology in engineered ecosystems, methanogenesis
Tom Desmet	Biocatalysis and enzyme engineering
Ramon Ganigué	Anaerobic microbial technology, gas fermentation, bioproduction from wastes, waste-water treatment, sewer corrosion
Godelieve Gheysen	Plant biotechnology, molecular analysis of plant-pathogen interactions
Tina Kyndt	Molecular plant-nematode interactions, rice, plant defence, epigenetics
Kathy Messens	Agro and food biotechnology
Korneel Rabaey	Water treatment, bioproduction, renewable raw materials, (bio)electrochemical conversions
André Skirtach	Nanoparticles and nanoplasmonics, polymeric biomaterial coatings, drug delivery, mechanobiology, bioimaging and Raman scattering, microscopy
Wim Soetaert	Industrial biotechnology, fermentation, biocatalysis, metabolic engineering, biosurfactants
Inge Van Bogaert	Industrial biotechnology, biosurfactants, yeasts and fungi, cellular export over biological membranes, transporters
Els Van Damme	Biochemistry and glycobiology, plant lectins, protein-carbohydrate interactions and signal transduction in plants, and their importance for plant development
Tom Van de Wiele	Microbe-host interactions, gastrointestinal microbial technology, microbial metabolic potency, bioavailability processes

FACULTY OF
BIOSCIENCE ENGINEERING

DEPARTMENT OF DATA ANALYSIS AND MATHEMATICAL MODELLING

Developing multidisciplinary engineering approaches for the entire data-to-decision cycle of biosystems modelling for science, industry and society.

TOPICS

- Data analysis for life sciences: biostatistics and bioinformatics
- Knowledge-based, predictive and spatially explicit modelling of biological and natural processes
- Model-based design and optimisation of processes in resource recovery and pharmaceutical manufacturing

IMPACT

Promoting and implementing high-quality data analysis and modelling solutions for scientific, industrial and societal problems.

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CONTACT

ugent.be/bw/damm

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ACADEMIC STAFF

Jan Baetens	Spatially explicit modelling, dynamical systems, individual-based modelling, cellular automata
Johan D'heer	Physics for bachelor students
Bernard De Baets	Fuzzy set theory, artificial intelligence, mathematical modelling, operations research cellular automata
Tim De Meyer	Bioinformatics, (epi)genomics, transcriptomics, imprinting, ageing
Stijn Luca	Biostatistics, statistical data analysis
Ingmar Nopens	Model-based process and system analysis and optimisation using mechanistic models
Shodhan Rao	Mathematical biology, systems biology, stability theory, model reduction, chemical reaction network theory
Elena Torfs	Model-based optimization of bioprocesses, advances process control softsensor development
Wim Van Criekinge	Bioinformatics, computational genomics, epigenetics, translational medicine
Jan Verwaeren	Computational data analysis, digital image processing
Willem Waegeman	Machine learning, data science

FACULTY OF
BIOSCIENCE ENGINEERING

DEPARTMENT OF AGRICULTURAL ECONOMICS

The research in our department focuses on economic and sociopolitical analyses of agriculture and food 'from farm to fork', including urban, peri-urban and rural areas all over the globe. Our academic teaching reflects this broad scope and attracts an international audience. We offer related services to governmental and non-governmental organisations, as well as to corporations and civil society.

TOPICS

- Agricultural economics
- Agricultural, food and environmental policy
- Agri-food marketing
- Chain and business management
- Consumer behaviour
- Natural resources management
- Rural (development) economics and sociology

IMPACT

- Policy advice at local, national and international level
- Capacity building of partner institutes in other countries

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CONTACT

agecon.ugent.be

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ACADEMIC STAFF

Jeroen Buysse	Agricultural and environmental policy analysis
Marijke D'Haese	Rural development economics
Joost Dessein	Sociology of agriculture, food and rural development
Hans De Steur	Agro-food marketing, stakeholder behaviour and analysis, quantitative research methods in socio-economics
Xavier Gellynck	Agro-food marketing and chain management
Christine Yung Hung	Behavioural economics, public health nutrition, social marketing and policy
Ludwig Lauwers	Farm management, participatory modelling and efficiency analysis
Stijn Speelman	Natural resource management and economics
Guido Van Huylenbroeck	Agricultural and rural development policy, seconded to the University Central Office as Director of Internationalisation
Wim Verbeke	Agro-marketing and consumer behavior