



BIOLOGY & MEDICINE

Study Programmes





“Science is a way of life.
Science is a perspective.
Science is the process that
takes us from confusion to
understanding...”

Brian
Greene

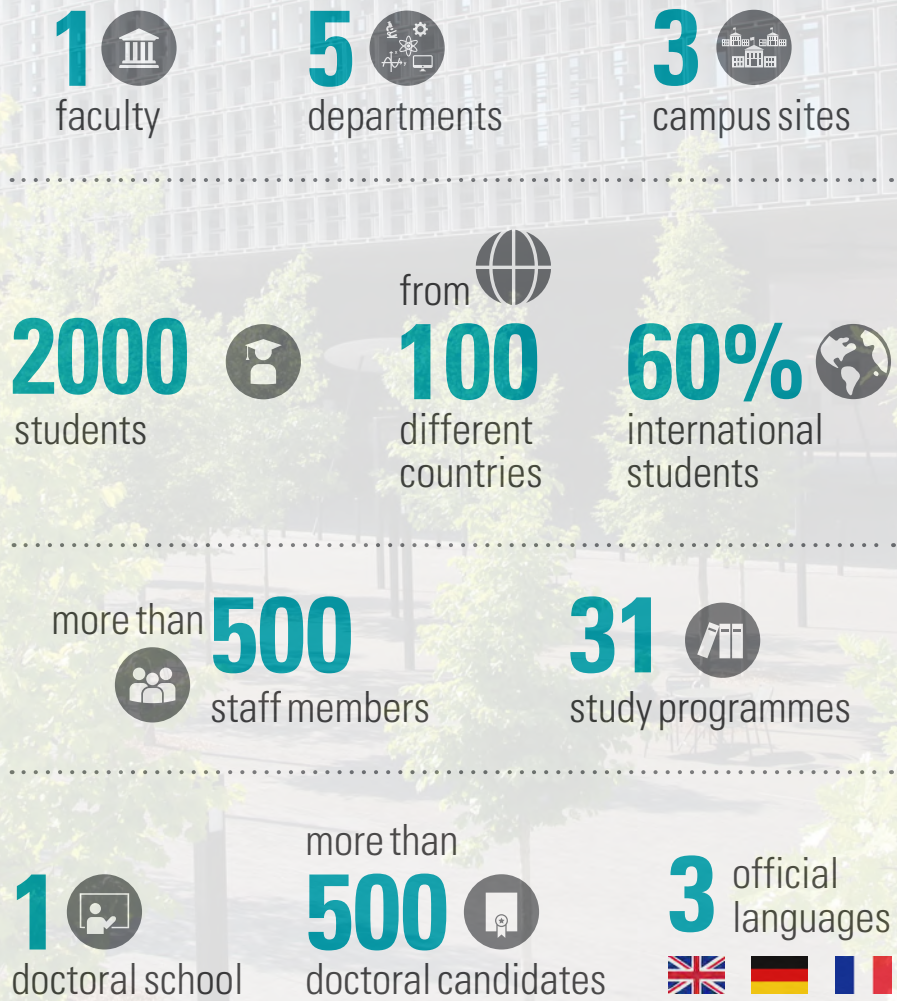


CONTENTS

FSTM at a glance	5
Why study biology and medicine?	6
Our study programmes	8
Bachelor en Sciences de la Vie - Filière Biologie	10
Bachelor en Médecine	12
Master in Integrated Systems Biology	14
International Master of Science in Biomedicine	16
European Master of Small Animal Veterinary Medicine	18
Certificate of Small Animal Veterinary Practice	18
Master in Production Animal Health	20
Certificate in Animal Health: Poultry Production	20
Certificate - Principles of Biobanking	22
Formation managériale pour le secteur hospitalier et de la santé	24
Formation Spécifique en Médecine Générale	26
Doctoral Programme in Systems and Molecular Biomedicine	28
Our department	30
Studying at our University	32
Discover Luxembourg	34



The Faculty of Science, Technology and Medicine (FSTM) **at a glance**



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Biology and Medicine?



Ambitious Life Sciences and BioHealth community

INTERNATIONAL ENVIRONMENT

Located in the heart of the European Union, the University of Luxembourg has made international cooperations one of its priorities and considers them as an important tool to reach excellence in research and education. The University has a strong commitment to Life Sciences/Biomedicine. Importantly, since more than 10 years, it has been part of Luxembourg government's strategy to invest substantially in the health sciences and technologies sector. Thus, Luxembourg has a young and ambitious Life Sciences and BioHealth community. Student cohorts at the University of Luxembourg are relatively small, allowing for a good learning atmosphere. Both students and teaching staff reflect the high degree of internationality which is part of the Luxembourgish society.

STRENGTHS

- Small class sizes & individual mentoring
- Outstanding modern infrastructure
- Multidisciplinary and multicultural approach
- Multilingual student life
- Opportunities for internships within the University of Luxembourg and outside (e.g. at research institutes)

Strong links with research

The Life Sciences study programmes are based at and operated by the Department of Life Sciences and Medicine (DLSM). Research at DLSM seeks fundamental understanding of human diseases to help detect, prevent and treat illnesses. Combining molecular, cellular and computational approaches, the researchers look deeply into how cells communicate, differentiate, migrate, renew themselves and function.

The DLSM was established in 2008 and is organised in five different laboratories or research groups:

- Signal transduction
- Cancer cell biology and drug discovery
- Molecular disease mechanisms
- Immune cells and inflammatory diseases
- Systems biology

Research activities at DLSM are performed under the umbrella topic "Signaling Networks in Cancer and Inflammation", with a focus on Tumour Biology. They closely collaborate with the Luxembourg Centre of Systems Biomedicine (LCSB), an interdisciplinary centre at the University of Luxembourg with a strong focus on Parkinson's disease and Bioinformatics and other renowned Luxembourgish research institutions, like the Luxembourg Institute of Health (LIH), including a Department of Oncology and a Department of Infection and Immunity. Experts from these institutes are lecturers in our teaching programmes and can supervise Master and doctoral theses.



Overview

BACHELORS (3 years)



180 ECTS

Bachelor en Sciences de la Vie - Filière Biologie



180 ECTS

Bachelor en Médecine



MASTERS (2 years)



120 ECTS

Master in Integrated Systems Biology



120 ECTS

International Master of Science in Biomedicine



120 ECTS

European Master of Small Animal Veterinary Medicine



120 ECTS

Master in Production Animal Health

POST-MASTER & DOCTORAL EDUCATION



30 ECTS

Certificate of Small Animal Veterinary Practice



30 ECTS

Certificate in Animal Health: Poultry Production



10 ECTS

Certificate - Principles of Biobanking



30 ECTS

Formation managériale pour le secteur hospitalier et de la santé



Formation Spécifique en Médecine Générale



Research + 20 ECTS

Doctoral Programme in Systems and Molecular Biomedicine



Bachelor en Sciences de la Vie Filière Biologie



180 ECTS

Ce bachelor permet d'acquérir de solides bases en biologie, bioinformatique, chimie, mathématiques et physique au cours des trois ans.

ATOUPS

- Possibilité d'obtenir un double diplôme en biologie au sein d'universités partenaires
- Etroit contact avec le Bachelor en Médecine
- Un semestre obligatoire dans une université étrangère

CONDITIONS D'ADMISSION (30 PLACES)

- Diplôme de fin d'études secondaires
- Sélection sur dossier basée sur les matières scientifiques
- Langues: B2 en français et en anglais
- Lettre de motivation et travail de rédaction personnel rédigés par l'étudiant/e

DÉBOUCHÉS

- Master en Biologie, Bioinformatique ou Sciences
- Opportunités professionnelles dans l'enseignement et la recherche fondamentale et/ou clinique

PROGRAMME EN UN COUP D'ŒIL

- **Durée:** 3 ans à temps plein / 6 semestres (180 ECTS) dont 1 semestre de mobilité à l'étranger
- **Langues:** français (65%), anglais (35%)
- **Frais d'inscription:**
 - 400€/semestre (1 & 2)
 - 200€/semestre (3 à 6)
- **Périodes d'inscription:** (30 places)
 - Etudiants UE: avril - juillet
 - Etudiants non UE: février - avril

INFORMATION ADDITIONNELLE

CONTACT

basv@uni.lu

CAMPUS

Belval & Limpertsberg



basv.uni.lu/biologie



"Le Bachelor en Sciences de la Vie offre une grande diversité de cours, ce qui permet d'avoir une vue globale sur les différents domaines de la biologie et d'acquérir les connaissances nécessaires pour continuer en master. Les accords passés avec des universités partenaires représentent également un atout considérable de ce bachelor. Nous avons effectué la deuxième année à l'Université de Strasbourg et avons ainsi obtenu un double diplôme !"

Julie Lauer et Jérôme Oswald, diplômés

PROGRAMME

Cours	ECTS
Semestre 1	
Academic induction	1
Biologie cellulaire et moléculaire	3
Biologie générale	2
Chimie générale et minérale	5
Chimie organique	2
Developmental biology	2
Geology	4
Mathématiques	5
Physique	6
Total	30

Semestre 2	
Academic induction	1
Biologie cellulaire et moléculaire	3
Biologie générale	2
Biochemistry	3
Chimie générale et minérale	3
Chimie organique	3
English	1
Informatique	2
Mathématiques	5
Philosophie	1
Physique et biophysique	6
Total	30

Semestre 3	
Biochemistry	5
Biologie animale	3
Biologie végétale	3
Écologie	2
Génétique	2
Molecular biology	3
Physique	6
Physiologie animale	2
Physiologie végétale	3
Projet	1
Total	30

Semestre 4	
Biochemistry	3
Bioinformatics	2
Biostatistics	4
Biologie animale	5
Biologie végétale	4
Écologie	3
English	2
Microbiologie	1
Physiologie animale	3
Projet	1
Stage de terrain	2
Total	30

Semestre 5	
Biostatistics	7
Histologie	2
Microbiologie	4
Metabolites and nutritional physiology	2
Molecular biology	5
Physiologie animale	3
Physiologie et communication cellulaire	4
Virology	3
Total	30

Semestre 6	
Bioinformatics	2
Biologie du développement	2
Biotechnology	1
Environnement	2
Histologie	4
Immunology	4
Molecular biology	3
Nervous system	4
Techniques biologie moléculaire	2
Stage	4
Option : cours au choix	2
Total	30



Bachelor en Médecine

Ce bachelor est développé à partir d'une première année d'études médicales existante à l'Université du Luxembourg et se concentre sur le développement précoce de compétences cliniques à travers une formation par simulation et du tutorat par des médecins aux capacités pédagogiques démontrées.

ATOUPS

- Insertion dans la pratique médicale dès le début de la formation
- Utilisation de concepts pédagogiques contemporains et des dernières technologies digitales
- Les effectifs limités à 25 en 2^{ème} et 3^{ème} année offriront des conditions d'apprentissage optimales
- Coopération étroite avec les Hôpitaux du Grand-Duché et les Universités partenaires à l'étranger

CONDITIONS D'ADMISSION (125 PLACES)

- Diplôme de fin d'études secondaires
- Sélection sur dossier basée sur les matières scientifiques
- Langues: certificats C1 officiels en français et en allemand d'une école de langue agréée
- Lettre de motivation et travail de rédaction personnel rédigés par l'étudiant/e

DÉBOUCHÉS

- Master en Médecine



"Nous proposons un curriculum orienté sur le développement de compétences, sans pour autant négliger l'acquisition des connaissances indispensables, le développement du raisonnement clinique et l'adoption d'attitudes professionnelles. Nous souhaitons que nos étudiants du Bachelor en Médecine intégrant les programmes de master dans nos universités partenaires se distinguent par l'excellence de leur formation !"

Gilbert Massard, directeur d'études

PROGRAMME EN UN COUP D'ŒIL

- **Durée:** 3 ans à temps plein / 6 semestres (180 ECTS)
- **Langues:** français (70%), allemand (20%), anglais (10%)
- **Frais d'inscription:**
 - 400€/semestre (1 & 2)
 - 200€/semestre (3 à 6)
- **Périodes d'inscription (125 places):**
 - Etudiants UE: avril - juillet
 - Etudiants non UE: février - avril

INFORMATION ADDITIONNELLE

CONTACT

bmed@uni.lu

CAMPUS

Belval & Limpertsberg

bmed.uni.lu



PROGRAMME

Cours	ECTS
Semestre 1	
Anatomie	3
Biologie cellulaire et moléculaire	3
Biologie générale	1
Chimie générale et minérale	5
Chimie organique	5
Chimie TP	2
Histologie + TP	3
Physiologie animale	2
Physique et biophysique + TP	7
Options : academic induction, Medizinische Fachsprache	
Total requis	31

Semestre 2	
Anatomie + TP	5
Biochimie et pathobiochimie + TP	5
Biologie cellulaire et moléculaire	3
Biologie générale TP	1
Découverte du médicament	1
Developmental biology	2
Histologie + TP	5
Médecine clinique et déontologie	2
Philosophie et éthique	1
Physique	2
Santé publique	1
Statistiques en médecine	1
Options: Champ professionnel, Lëtzebuergesch	
Total requis	29

Semestre 3	
Anatomie sur le vivant	1
Appareil digestif	7
Appareil locomoteur	5
Biomedicine quantitative	1
Cardio-respiratoire	7
Compétences transversales	2
Introduction à l'examen clinique	4
Stage de sémiologie	2
Stage de soins d'urgence	1
Techniques de labo: anapath, bio mol	
Total requis	30

Semestre 4	
Hormonologie-reproduction-nutrition	7
Microbiologie + TP	4
Radioanatomie	1
Rein et voies urinaires	5
Revêtement cutané	2
Système sensoriel	7
Santé publique	1
Simulation	1
Stage de sémiologie	2
Total	30

Semestre 5	
Compétences transversales	2
Microbiologie	3
Module bioclinique action des médicaments	2
Module bioclinique biopathologie	2
Module bioclinique génétique médicale	3
Module bioclinique oncologie générale	2
Module bioclinique sang et système immunitaire	4
Module de médecine générale	3
Radioanatomie	
Simulation	1
Stage de soins d'urgence	1
Stage hospitalier en chirurgie	2
Stage hospitalier en médecine	2
Stage pratique médecine générale (2 semaines)	3
Total requis	30

Semestre 6	
Compétences transversales	1
Exercices d'imagerie	1
Microbiologie	3
Pathologie appareil locomoteur	3
Pathologie cardiovasculaire	6
Pathologie neurologie-neurochirurgie	4
Pathologie pulmonaire et thoracique	4
Santé publique - digital health	2
Simulation	1
Stage de pré-externat	3
Options: data science	2
Total requis	30



Master in Integrated Systems Biology

This Master enables students to acquire a deeper knowledge of biosciences taking into account new technologies. This involves handling large amounts of data and thus bioinformatics and network analysis are essential elements in this modern education in biosciences.

STRENGTHS

- Combination of life sciences and computational science
- Use of the most modern technologies in biosciences
- Early involvement in research projects
- Strong links with the Department of Life Sciences and Medicine (DLSM) and Luxembourg Centre for Systems Biomedicine (LCSB) at the University of Luxembourg

ADMISSION REQUIREMENTS (18 PLACES)

- Bachelor degree in biosciences, bioinformatics or related field
- Language: B2 in English

CAREER OPPORTUNITIES

- Employment opportunities in the biotech and pharmaceutical industries
- Researcher in biological, biomedical or pharmaceutical laboratories
- Data scientist with a focus on biomedical applications
- Further studies at PhD level

PROGRAMME AT A GLANCE

- **Duration:** 2 year full-time programme/ 4 semesters (120 ECTS)
- **Language:** English
- **Registration fees:** 200€/semester
- **Application period:** (18 places)
 - For EU students: February - July
 - For non-EU students: February - April

ADDITIONAL INFORMATION

CONTACT

misb@uni.lu

CAMPUS

Belval

misb.uni.lu



"In recent years, it is getting more apparent that computational analysis of large biological datasets and results interpretations are pre-requisite skills for future biomedical scientists. The MISB programme is an entry point to acquire such skills, as it offers both theoretical and practical courses in molecular biology as well as in bioinformatics and systems biology. As a previous Bachelor graduate in biomedicine, I filled my knowledge gap in computational modelling and analysis of biomedical data which subsequently allowed me to pursue my career in the field of computational biomedicine."

Panuwat Trairatphisan, graduate

PROGRAMME

Courses	ECTS
Semester 1	
Gene regulation / transcriptomics	4
Introduction to systems biology	4
Practicals in gene regulation	4
Protein structure and function	4
Proteomics	4
Practicals in systems biology	4
Practicals in bioinformatics	4
Safety in the laboratory	2
Total	30

Semester 2	
Advanced cell biology	4
Advanced systems biology	4
Bioscience seminar series	2
Genomics / databases	4
Metabolomics and metabolism	4
Microscopy and imaging	4
Practicals in advanced cell biology	4
Top-down systems biology	4
Total	30

Semester 3	
Academic writing workshop	3
Advanced systems biology	2
Molecular medicine	8
Research practical	18
Total	31

Semester 4	
Master Thesis	30
Total	30





International Master of Science in Biomedicine

120 ECTS

The joint international study programme in Biomedicine provides students with a strong multidisciplinary education in the fields of cardiovascular and metabolic diseases, neurosciences and immunology. They have the opportunity to experience a multidisciplinary research training as well as a multicultural approach of the scientific communities across the borders.

STRENGTHS

- Tri-national diploma with the University of Strasbourg and the Johannes Gutenberg University Mainz
- Multidisciplinary and multicultural approach
- Small class sizes & individual mentoring
- Students use state-of-the art experimental and computational facilities

ADMISSION REQUIREMENTS (16 PLACES)

- Bachelor degree in biosciences, bioinformatics or related field
- Language: B2 in English

CAREER OPPORTUNITIES

- Researchers and teachers in the pharmaceutical industry, health agencies, universities and hospitals at international level
- Employment opportunities in the biotech and pharmaceutical industries
- Researcher in biological, biomedical or pharmaceutical laboratories
- Further studies at PhD level

In collaboration with:



PROGRAMME AT A GLANCE

- **Duration:** 2 year full-time programme/ 4 semesters (120 ECTS)
- **Language:** English
- **Registration fees:** 200€/semester (uni.lu)
- **Application period:** via Strasbourg (16 places)
 - For EU students: March - May
 - For non-EU students: March - April

ADDITIONAL INFORMATION

CONTACT

mbiomed@uni.lu

CAMPUS

Belval

mbiomed.uni.lu



PROGRAMME

Courses	ECTS
Semester 1 - University of Luxembourg	
Gene regulation / transcriptomics	4
Introduction to systems biology	4
Safety in the laboratory	2
Electives:	
Practicals in gene regulation	4
Practicals in systems biology	4
Practicals in bioinformatics	4
Protein structure and function	4
Proteomics	4
Academic writing workshop	3
Research practical	18
Total required	30

Semester 2 - Université de Strasbourg	
Biological responses: from targets to treatments	3
Cell responses: from receptors to signaling	3
Hot topics in biomedical sciences	3
Initiation to pre-clinical research (internship 105h)	3
Molecular pharmacology	3
Molecular vascular medicine and cardiology	6
Molecular aspects of dyslipidemia and diabetes	3
Electives:	
Advanced clinical trials	3
Foreign language	3
Genetically modified experimental animal models	3
Initiation to clinical trials	3
Regenerative medicine: strategies and therapeutic application	3
Therapeutic potential of stem cells	3
Total required	30

Semester 3 - JG Universität Mainz	
Approaches and applications in molecular medicine and clinical immunology + research project in molecular medicine & clinical immunology	12
Human neurobiology + research project in neurosciences	12
Electives:	
Communication skills and rhetoric	2
Experimental animal course (European certification)	2
Foreign language	2
Introduction to radiology	2
Scientific data formatting and editing	2
Total required	30

Semester 4	
Master Thesis	30
Total	30



"Being a good scientist ask to be very adaptable. The tri-national Master was a perfect way to develop this skill for me. Moving every semester can be difficult but the experiences and the new cultures you jump into are worth it. I really enjoyed the combination of biology and computer sciences in Luxembourg, as well as the possibility to choose some optional courses in Strasbourg. In Mainz, we had the opportunity to discover neurobiology and immunology in very interactive courses."

Emérentienne Michelin, graduate



Master & Certificate of Small Animal Veterinary Medicine



Since 1992, the European School for Advanced Veterinary Studies (ESAVS) has been providing post-graduate training courses for veterinarians wishing to upgrade their knowledge in many areas of clinical veterinary medicine. These courses are the foundation of the European Master and Certificate programmes.

In collaboration with:



EUROPEAN MASTER OF SMALL ANIMAL VETERINARY MEDICINE (EMSVM)

- The EMSVM is a post-graduate qualification, also defined as a “professional Master degree”, which means that the degree is obtained by part-time formal course work (ESAVS elective courses) and individual written work (case logs, case reports and thesis) validated by examinations
- The European Master degree corresponds to 120 ECTS credits and testifies an intermediate level of clinical competence and in-depth theoretical knowledge in a specific discipline as well as communicative and investigative skills

Further information: www.esavs-master.org

CERTIFICATE OF SMALL ANIMAL VETERINARY PRACTISE (CSAVP)

- The CSAVP prepares the veterinarian to attain an intermediate level of competence in a specific discipline
- It promotes the problem-solving approach and the concept of evidence-based medicine in daily practice
- The CSAVP corresponds to 30 ECTS and involves modules in course work and written work (case log) validated by examinations

Further information: www.esavs-certificate.org

ADMISSION REQUIREMENTS

- Graduate veterinarians (for Master & Certificate)
- Language: B2 in English

PROGRAMME AT A GLANCE

- **Duration:**
 - EMSVM: 4 years (120 ECTS)
 - CSAVP: min. 2 years and max. 5 years (30 ECTS)
- **Language:** English
- **Registration fees:** 200€/semester + course fees (see esavs.eu)

ADDITIONAL INFORMATION

CONTACT

- Master: emsavm@uni.lu
- Certificate: csavp@uni.lu

CAMPUS

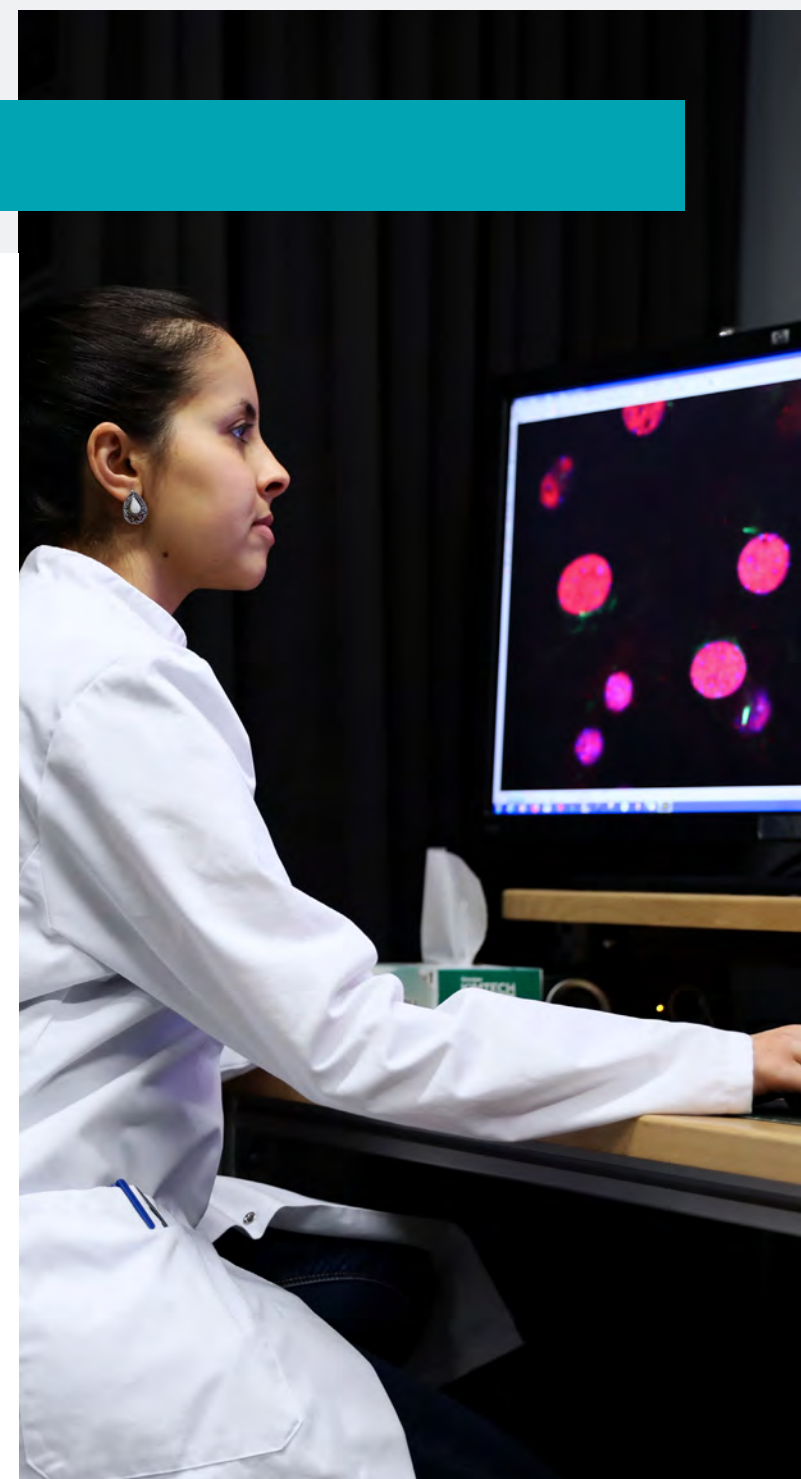
Limpertsberg (+ other parts in Europe, depending on selected courses)

esavs.eu



PROGRAMME

Elective courses	ECTS
Anaesthesiology	8
Behavioural Medicine	10
Cardiology	18
Dentistry	15
Dermatology	33
Diagnostic imaging	3
Diagnostic ultrasound	10
Emergency & critical care	13
Endoscopy	7
Exotic pets medicine & surgery	5
Feline medicine & surgery	40
Internal medicine	30
Internal medicine: blood / metabolic disorders	3
Internal medicine: endocrinology	3
Internal medicine: gastroenterology	3
Internal medicine: urology and respiratory disorders	3
Neurology	18
Neuropathology	5
Neurosurgery	5
Oncology	10
Ophthalmic surgery	5
Ophthalmology	23
Oral surgery	5
Orthopaedics	8
Radiology	10
Rehabilitation & physiotherapy	10
Reproduction	18
Soft tissue surgery	10
Surgery	8
Ultrasonography	3





Master & Certificate in Animal Health: Poultry Production



In collaboration with the World Veterinary Education in Production Animal Health (WVEPAH), the Master and Certificate in Animal Health: Poultry Production are designed for professionals already active in the poultry industry who wish to broaden their knowledge in the area of poultry health and production.

STRENGTHS

- Recognition by the World Organisation for Animal Health (OIE)
- Residential courses and distance learning
- Case-oriented and problem-solving approach

MASTER IN PRODUCTION ANIMAL HEALTH (MPAH)

- The MPAH is a post-graduate qualification designed for poultry senior executives. The Master will help them to get into future international systems for specific practice certification. Based on part-time work basis, the Master consists of residential courses and distance learning.
- The University of Luxembourg awards the Master's degree following successful completion with 120 ECTS.

CERTIFICATE IN ANIMAL HEALTH: POULTRY PRODUCTION (CAHPP)

- The CAHPP is an intermediate level for veterinarians who want to learn more about poultry health and production.
- The University of Luxembourg awards the Certificate's degree following successful completion with 30 ECTS.

ADMISSION REQUIREMENTS

- University degree (veterinary medicine or agronomical education in animal production)
- Professional activity in the poultry sector
- Language: B2 in English

In collaboration with:



PROGRAMME AT A GLANCE

- **Duration:**
 - **mpah:** 4 year programme (120 ECTS)
 - **CSAVP:** min. 2 years and max. 5 years (30 ECTS)
- **Languages:** English
- **Registration fees:** 200€/semester + course fees (see wvepah.org)

ADDITIONAL INFORMATION

CONTACT

- Master: mpah@uni.lu
- Certificate: cahpp@uni.lu

CAMPUS

Worldwide

wvepah.org



PROGRAMME

Courses	ECTS
Module 1 (electives)	15
Module 2 (electives)	15
Module 3	10
Case logs and reports	30
Practical work	20
Thesis	30
Electives: choose 2 among 4:	
Chicken	
Egg layer	
Turkey	
Water fowl	





Certificate - Principles of Biobanking

10 ECTS

Biospecimens have become a strategic tool for healthcare and medical research, research and conservation in biodiversity, animal, plant and microbial biology as well as in translational research and systems biology through all types of -omics applications. Optimal management of biospecimens and bioresources through biobanking for future research and conservation has now become a new discipline.

STRENGTHS

- Combination of environmental and clinical principles of biobanking
- Courses delivered by renowned experts in the field
- Site visits and practical demonstrations

OBJECTIVES

- Provide the theoretical, operational and practical knowledge required to facilitate the activities of existing biobanks and assist the creation of new ones
- Encourage exchange of knowledge and skills across different thematic biobanking groups involved in bio-specimen conservation, storage, science and research

AUDIENCE

Biobank managers, biobank auditors, biobank technicians, ethics committee members, clinical researchers, pathologists, and environmental collection curators

ADMISSION REQUIREMENTS

- Bachelor degree or equivalent and a background in biobanking
- Language: B2 in English

In collaboration with:



PROGRAMME AT A GLANCE

- **Lifelong learning integrated biobanking academic course with written examination**
- **Duration:** Full-time during 3 consecutive weeks (10 ECTS)
- **Selection:** max. 35 students
- **Language:** English
- **Registration fees:** 2,750€ + 3% TVA
- **Application period:** The next session is being planned, details on the exact dates will be announced.

ADDITIONAL INFORMATION

CONTACT

certificates@competence.lu

CAMPUS

Kirchberg

cpb.uni.lu



PROGRAMME

Courses	Number of hours
Week 1	
Analytical variability	5
Biochemistry of nucleid acids and proteins	1
Biodiversity - Barcode of life	1
Biospecimen science	3,5
Cryobiology	1,5
Environmental biobank case study	1,5
Epigenetic applications, microRNA	1
From environmental to healthcare, biobank and personalised medicine	1
Genomic and transcriptomic applications	4,5
Metabolomics - Systems biology	2,5
Protoemics applications	2
Redcap	1
Sample preparation for research project	1
Size and power	1,5
Typology and biobank anecdotes	1,5
Total	29,5

Week 2	
Analytical variability	1
Biobank IT	3,5
Biobanking at national history collections	1,5
Biospecimen research, preanalytics	2
Cohorts	1,5
Cost analysis	2
Cryobiology	1,5
CryoXtract	0,5
Epidemiologic aspects	1
Fitness for purpose, tissue preservation	2
IBBL visit	3
Impact of preanalytical errors on clinical laboratory blood specimens	2
Practical sessions	3,5

Project management	1
Sample preservation for proteomics	0,5
SPREC, data quality	1,5
Statistics and collections	1,5
Statistics and methods	2
Storage temperatures, method validation	1,5
Total	33

Week 3	
Alternative tissue fixatives	0,5
Ethical issues	3
International developments	1
Introduction to pathology	2
Legal aspects	4
Method validation and biospecimen quality control	2
Microbial strains biobanking	2
Microbiome	1,5
Quality control of cellular derivatives	1
Quality control of environmental samples	1
Quality control of molecular derivatives	1
Risk management	2
Shipment and dangerous goods	1
SOP workshop	2,5
Stem cells biobanking	1,5
Quality management: fundamentals	1,5
Quality management: certification and accreditation	1
Tumour banks, proficiency testing	1,5
Total	30

Formation managériale pour le secteur hospitalier et de la santé

30 ECTS

En partenariat avec le Competence Centre et la Fédération des Hôpitaux Luxembourgeois (FHL), le programme de formation managériale est adapté aux défis, aux besoins et aux spécificités du secteur de la santé au Luxembourg. Sa spécificité réside dans l'expertise des participants, tous professionnels de la santé, ainsi que dans l'élaboration et la présentation d'un projet professionnel.

OBJECTIFS

- Connaître le contexte hospitalier luxembourgeois
- Comprendre la stratégie et gérer la qualité des soins de santé
- Intégrer les principes de gestion
- Gestion des ressources humaines
- Comprendre et gérer les finances

PUBLIC CIBLE

Tout professionnel du secteur hospitalier et des soins, cadre ou futur cadre.

CRITÈRES D'ADMISSION

- Minimum Bac+1
- Langue: niveau B2 en français
- Les conditions d'admission sont établies sur la base d'un dossier examiné par le comité d'admission

En collaboration avec:



PROGRAMME EN UN COUP D'ŒIL

- Durée: 3 semestres à temps partiel (30 ECTS)
- Langue: FR
- Frais d'inscription: 5100€
- Places disponibles: 16
- Début des cours: 2022

INFORMATION ADDITIONNELLE

CONTACT

certificates@competence.lu

CAMPUS

Belval

fmhs.uni.lu



PROGRAMME

Cours	ECTS
Module 1 : connaître l'environnement de la santé au Luxembourg	
Connaître le contexte luxembourgeois de la santé	
Stratégie de l'établissement et rôle du cadre	
Gestion des situations de crise	
Ethique et droit du patient (RGPD)	
Interfaçage des systèmes de santé	
Orientations gouvernementales en faveur de la digitalisation	
La digitalisation et les nouvelles organisations de soins	
Total	3

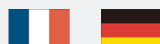
Module 2 : comprendre la stratégie et piloter la qualité en santé	
Stratégies gouvernementales en faveur de la qualité	
Application de la stratégie gouvernementale dans la mise en œuvre des politiques qualités de l'établissement	
Pilotage de la qualité	
Connaître les modèles/outils au service du déploiement de la qualité	
Appropriation des outils d'analyses	
Mesure de la qualité	
Total	5

Module 3 : intégrer les principes du management	
Théories du management	
Style de leadership	
Leadership et neurosciences	
Ethique et management	
Conduite du changement	
Communication	
Devenir un ambassadeur de l'intelligence collective	
Total	6

Module 4 : gérer les ressources humaines	
Comprendre la fonction RH	
Gestion prévisionnelle des effectifs, métiers et compétences	
Droit du travail, convention collective, dialogue social	
Recrutement et accueil du nouveau collaborateur	
Développer les compétences et encourager la formation continue	
Motivation et fidélisation des salariés	
Entretiens et feedbacks	
Gestion de conflits et médiation	
Total	7

Module 5 : comprendre et gérer des finances	
Connaître les sources de financement du secteur de la santé	
Connaître les modalités de financement de la Grande Région	
Connaître les bases du système comptable	
Gérer un budget	
Interpréter et utiliser les tableaux de bord financiers	
Total	2

Module 6 : projet professionnel	
Introduction au projet professionnel	
Gestion de projet appliquée au projet professionnel	
Prise de parole en public	
Total	7



Formation Spécifique en Médecine Générale



Cette qualification professionnelle spécialisée vise à autoriser l'exercice de la médecine générale. La formation spécifique en médecine générale à temps plein a une durée de trois ans au moins. Elle peut être organisée à temps partiel, en totalité ou en partie, sans que la durée totale, le niveau et la qualité de la formation ne soient inférieurs à celle de la formation à temps plein.

ATOUTS

- Plus de 100 maîtres de stage généralistes et hospitaliers répartis sur le territoire luxembourgeois
- Des enseignants expérimentés exerçant la médecine générale
- Environnement multilingue

CONDITIONS D'ADMISSION

- Diplôme: titre de formation médicale obtenu dans un Etat membre de l'Union européenne (Suisse, Espace économique européen) ou dans un pays tiers (voir les détails sur le site fsmg.uni.lu)
- Nationalité: ressortissant d'un Etat membre de l'Union européenne (Suisse, Espace économique européen) ou ressortissant d'un pays tiers disposant d'un titre de séjour en cours de validité émis par le Ministère des Affaires étrangères et européennes luxembourgeois
- Maîtrise des langues: B2 en français et en allemand

DÉBOUCHÉS

- Pratique de la médecine générale dans toute l'Union européenne



"La formation FSMG est très bien structurée entre les stages extra et intra-hospitaliers, et les cours théoriques et cliniques. Elle m'a permis à la fois d'être bien encadrée et guidée tout en restant autonome dans mes choix. Elle m'a permis également de faire de belles rencontres tant sur le plan personnel que professionnel. Au final, au cours de mes 3 années de formation, j'ai pu acquérir les outils nécessaires pour travailler directement en tant que médecin généraliste en toute confiance, et j'ai pu rencontrer et former des liens avec les autres professionnels de la santé."

Sophie Gorniewicz, diplômée

PROGRAMME

- **Durée:** 3 ans à temps plein
- **Langues:** français (50%), allemand (50%)
- **Frais d'inscription:** 200€/semestre
- **Sélection:** nombre de places disponibles publié chaque année par le comité d'admission
- **Période d'inscription:**
 - Etudiants UE: juin
 - Etudiants non UE: mars-avril

INFORMATION ADDITIONNELLE

CONTACT

fsmg@uni.lu

CAMPUS

Limpertsborg

fsmg.uni.lu



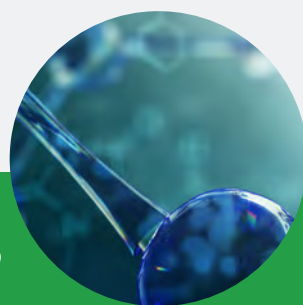
PROGRAMME

Cours	Nombre d'heures
Accueil de la délégation médicale	1
Aspects pluriculturels en médecine générale	3
Céphalées en médecine générale	4
Certificats, constats, rapports demandés au médecin généraliste	2
Dermatologie en médecine générale	4
Diabète	2
Diététique	2
Dysthyroïdies	3
Evidence-based medicine. Recherche bibliographique. Techniques nouvelles de formation	4
Ethique en médecine générale	3
Gériatrie	8
Gynécologie	6
Hypertension artérielle	4
Médecine préventive. Dépistages en médecine générale	4
L'adolescent	2
Le cas banal et ce qu'il peut cacher	2
Le patient démun	2
Le patient difficile	2
Le suivi du patient chronique. Gestion du dossier en médecine générale. Identification des principales pathologies chroniques	8
Electrocardiogramme en médecine générale	3
Législation sociale luxembourgeoise	10
Dépendances. Toxicomanies	8
Pathologies banales. Maladies auto-résolutives	2
Urgences en Médecine Générale	6
Maladies psychosomatiques et troubles fonctionnels	12
Médecine de l'environnement	4
Médecine palliative. Fin de vie. Traitement de la douleur	10
Organisation du cabinet et gestion financière	3

Cours	Nombre d'heures
Pathologie ostéoarticulaire	21
Pathologie veineuse des membres inférieurs	2
Pathologies infectieuses courantes. Antibiothérapie	8
Pathologies psychiatriques en médecine générale. Les psychothérapies	19
Pédiatrie	6
Petite chirurgie. Soins des plaies. Ulcères de jambe	3
Prescrire. Le traitement symptomatique. L'essai de traitement. Situation particulière du Grand-Duché quant aux possibilités de prescription	12
Rappel urgences	4
Recherche en médecine générale	1
Relation Médecin / malade. Communication en médecine générale	12
Rôle et fonction du médecin généraliste. Spécificité de la médecine générale. Mission communautaire	8
Santé et maladie dans la perspective du patient	3
Santé publique. Recueil de données. Le dossier clinique. Les réseaux. Médecine du Travail. Médecine Scolaire. Interactions du généraliste avec les secteurs conventionnés des Ministères de la Santé et de la Famille.	4
Sexologie	2
Vomissements et diarrhées	2
Total	223



Doctoral Programme in Systems and Molecular Biomedicine



The programme provides a high-quality research training to doctoral candidates and offers them complementary education to complete their knowledge and skills required for their career development.

OBJECTIVE

The overall objective is to enable excellent students to acquire both academic and transferable skills including:

- Scientific and personal skills
- Relational skills
- Self-management skills
- Leadership and management skills

LEARNING OUTCOMES

- Research ability and capacity to manage and present information
- Conducting research, including interdisciplinary research, and applying different technologies
- Achievement of a common ground of knowledge through a common track of taught courses
- Ability to teach and to communicate with target groups as part of the skill set required for the personal career development
- Independent thinking and ability to apply experience, expertise and knowledge to solve problems

ENTRY REQUIREMENTS

- Master in natural sciences, bioinformatics, medicine, or veterinary medicine
- Students with a background in physics or mathematics can also be accepted, based on their motivation and potential for interdisciplinary research

In collaboration with:



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PROGRAMME AT A GLANCE

- **Research theme:** Molecular Biomedicine and Systems Biomedicine
- **Partners:** Joint project Department of Life Sciences and Medicine (DLSM) + Luxembourg Centre for Systems Biomedicine (LCSB) + Luxembourg Institute of Health (LIH)
- **Language:** English
- **Disciplinary and transferable skills courses (20 ECTS)**
- **Number of doctoral candidates:** 130

ADDITIONAL INFORMATION

CONTACT

dpsmb@uni.lu

CAMPUS

Belval

dpsmb.uni.lu



"The Doctoral Programme in Systems and Molecular Biomedicine gave me the opportunity to further evolve my scientific knowledge and be part of a large doctoral community/family. I had the chance to participate not only in scientific courses but also in workshops that helped me understand how I could manage my time and tasks or further develop my goals for next career steps."

Maria Angeliki Pavlou, graduate



Life Sciences and Medicine

Research at the Department of Life Sciences and Medicine (DLSM) seeks fundamental understanding of human diseases to help us detect, prevent and treat illnesses. Combining molecular, cellular and computational approaches we look deeply into how cells communicate, differentiate, migrate, renew themselves and function. Central to this is gaining knowledge of the signals cells receive from their environment. Many high impact diseases are caused by abnormal cell communication and behaviour, including cancer and inflammatory diseases.



DLSM at a glance

MEMBERS

- 8 professors
- 30 post-docs and research scientists
- 19 doctoral candidates
- 19 technical and administrative staff

FUNDING AND COLLABORATIONS

- Third party income 2019-2020: €3.1 million
- More than 40 national & international collaborations with research institutions, universities, companies & hospitals



PUBLICATIONS (2019-2020)

- 77 peer-reviewed articles in scientific journals

ADDITIONAL INFORMATION

CONTACT

dls@uni.lu

CAMPUS

Belval

dls.uni.lu



Research areas

CANCER CELL BIOLOGY & DRUG DISCOVERY

- Cancer cell biology of RAS associated stemness traits
- Drug targeting of RAS signalling
- Molecular cell biology of RASopathies

IMMUNE CELLS & INFLAMMATORY DISEASES

- Intracellular and extracellular role of S100A8/A9 in neutrophil pro-inflammatory functions
- Role of neutrophils in rheumatoid arthritis

MOLECULAR DISEASE MECHANISMS

- Identification of biomarkers and therapeutic targets in colon cancer
- Molecular mechanisms underlying colon cancer initiation and development
- Role of the microenvironment and environmental factors on colon cancer

SIGNAL TRANSDUCTION

- Cytokine signal transduction
- Drug screening in 3D cancer models
- Intercellular communication in cancer
- Metabolic rewiring in cancer
- MiRNAs and long non-coding RNAs

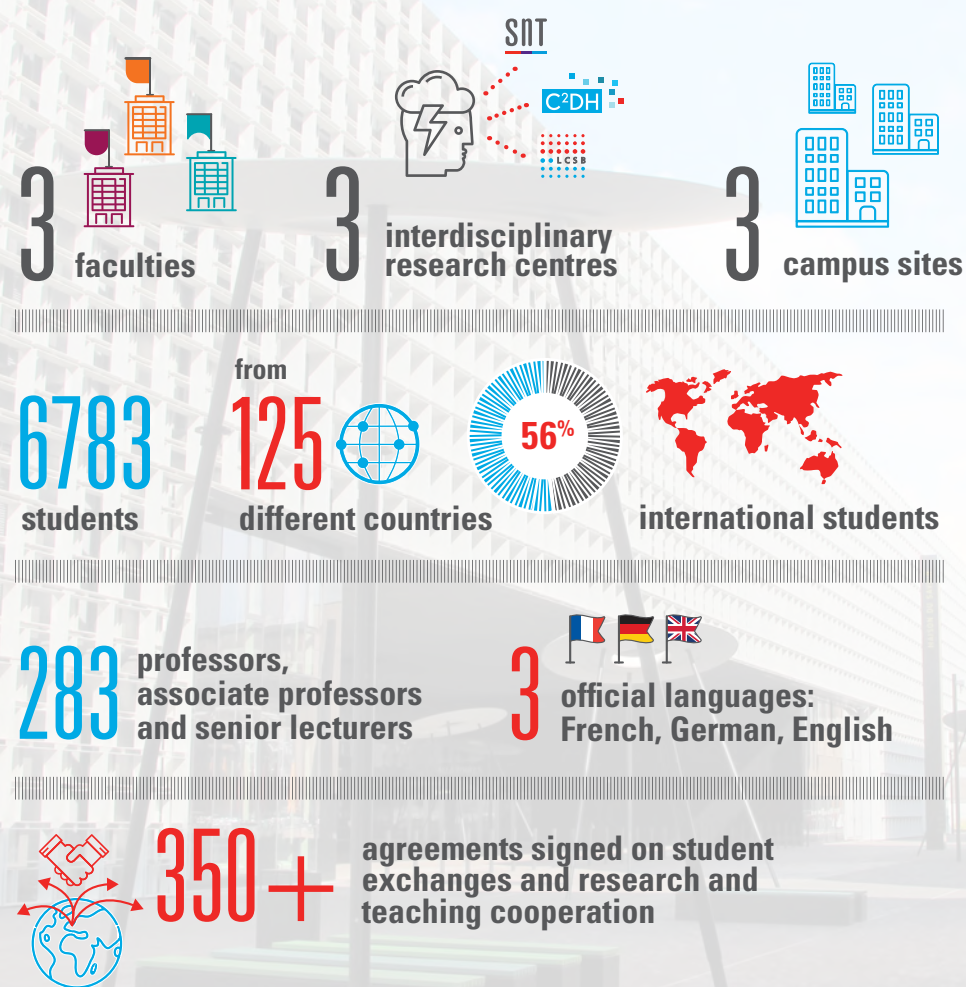
SYSTEMS BIOLOGY

- Cancer specific signaling networks and multi-scale modeling of cancer
- Data mining of human clinical and cohort data
- Integrated modelling and epigenetic regulation of metabolism
- Model based data integration and analysis of disease specific networks
- Tool development



Young, dynamic and international

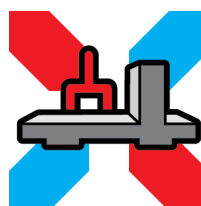
The University of Luxembourg is a European research-oriented university with a strong international and multilingual character. Founded in 2003, the university currently counts more than 6,000 students. Members of the university community come from all over the world.



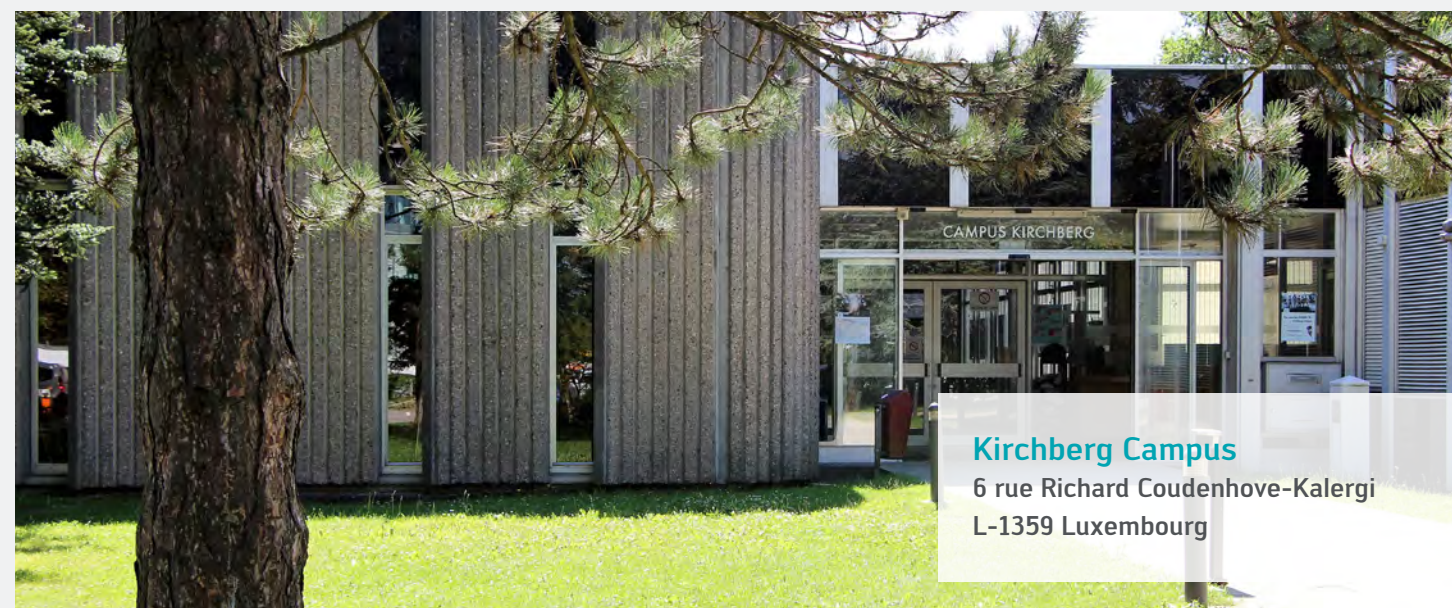
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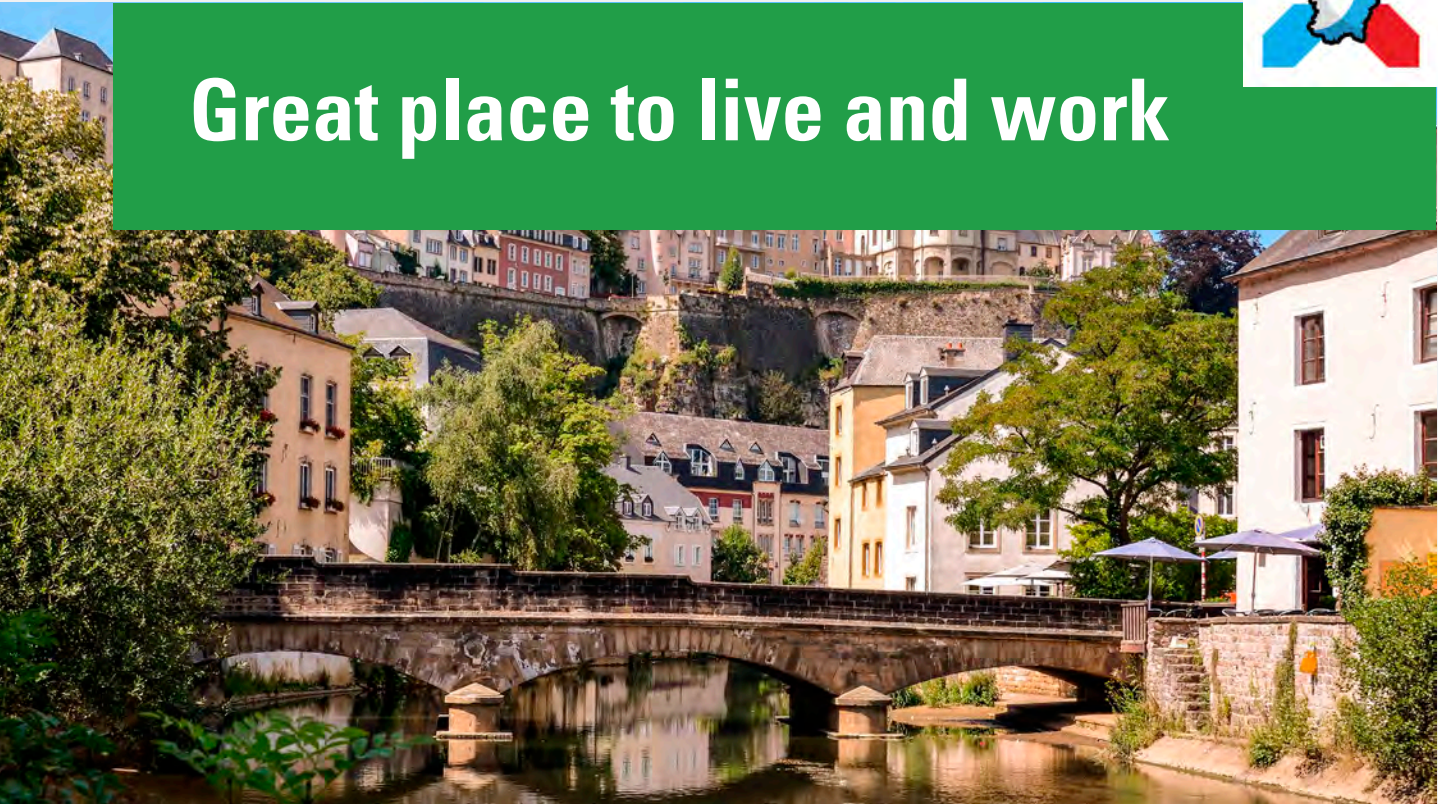


Three campus sites





Great place to live and work



Located in the heart of Europe, the Grand Duchy of Luxembourg boasts a colourful history, stunning landscape, multicultural environment and multilingual population. The thousand year old capital and five regions each have their own unique flavour and discoveries to be made. Experience contemporary and historic culture, explore the country's hiking and cycling trails, and taste world-class cuisine and local wine.

visitluxembourg.com



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live side by side

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University of Luxembourg

■ Faculty of Science, Technology and Medicine

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L-1359 Luxembourg

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