



Faculty of Biology and Medicine

Teacher's Handbook

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Preamble: the purpose of this booklet and an explanation of the Bologna Process

The purpose of this booklet is to provide all of the teachers in our Faculty, especially those who are at the start of their academic career, with a document that will give them the information they need to plan, deliver and evaluate their teaching in the most effective manner.

Signed about ten years ago, the Bologna agreements created a *European Higher Education Area* (EHEA), with the following stated aims:

- To strengthen the autonomy of universities
- To increase mobility of students from one course of study to another and from one university to another
- To improve cooperation between the universities and between the latter and universities of applied sciences
- To promote quality, by means of self-assessment and/or accreditation procedures.

The measures implemented in order to achieve these goals are now known: teaching is based on a modular structure. Each course of study is assessed and leads, if completed successfully, to the award of ECTS credits¹. In principle, one academic year is worth 60 credits, spread out over two semesters. Each credit corresponds to approximately 30 hours of classes and personal study.

The system for awarding credits requires the student to undergo a series of assessments: active participation in classes, completion of a project or a presentation, multiple-choice exam, oral exam, essay, and so on. The Bologna system also stipulates that assessments should focus on skills, according to well-defined learning objectives. All teaching must lead to a form of assessment, which represents a limitation in comparison with the more liberal system in force before the reform. The advantage of the ECTS system is that it is and will become more widely recognised on an international level and will eventually allow increased mobility between regions and countries on the one hand, and different courses of study on the other.

The Bologna agreements have been followed by a whole series of other agreements, leading to the creation of a system for organising teaching with the following characteristics: structure consisting of a Bachelor's degree (3 years), followed by a Master's degree (1.5-2 years, except in the case of Medicine, where the Master's degree course lasts 3 years), encouragement of independent work alongside lectures, emphasis on the acquisition of so-called transferable skills, in other words, skills that are not specifically associated with any given discipline (for instance ethics).

Finally, a particular emphasis should be placed on the students' "employability", or in other words, their ability to be integrated into the world of work at the end of their studies.

The purpose of this booklet is to facilitate the teacher's job by bringing together the latest recommendations regarding teaching that have been issued by the Faculty of Biology and Medicine. However, its purpose is also to introduce a number of tools and structures that aim to support teaching staff in fulfilling their tasks. This booklet will inevitably evolve as the Faculty changes over time.

*Pierre-André Michaud
Vice-Dean of Teaching*

¹ ECTS: European Credit Transfer System

1 Organisation of the Faculty of Biology and Medicine (FBM)

The overall mission of the Faculty of Biology and Medicine is to transmit, deepen and develop knowledge in the fields of Biology and Medicine, through research, teaching and services.

The FBM was established in 2003 and formed the product out of the merging of the Biology Department of the Faculty of Sciences with the Faculty of Medicine. Bringing together Biology and Medicine under one roof has widened the spectrum of active collaborations, especially with regard to Master's degree courses, and even more so at postgraduate level.

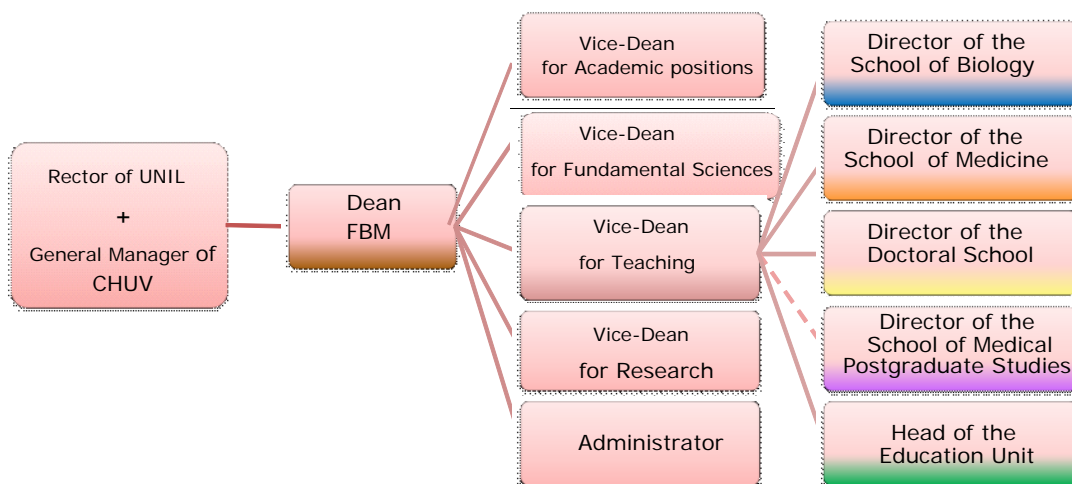
The FBM collaborates with the six other Faculties of the University of Lausanne (UNIL) in the fields of education and research, and partnerships with other universities in the French-speaking region of Switzerland are in place in the field of doctoral education. Currently, teachers from the School of Sciences of the Ecole Polytechnique Fédérale de Lausanne (EPFL) teach basic sciences to first-year students studying for a Bachelor's degree in Medicine and Biology.

In addition to the Schools of Biology and Medicine, two other schools have been created: the Doctoral School, which offers training programmes that complement the execution of doctoral research, and the School of Postgraduate Medical Studies, currently under development, which collaborates closely with the Medical Directorate at the University Hospital Centre in Vaud (Centre Hospitalier Universitaire Vaudois, CHUV) as well as with other hospital partners.

Finally, an Education unit that works in collaboration with the Teaching Support Unit (Centre de soutien à l'enseignement, CSE) at UNIL offers training workshops and teaching support and carries out assessments of teaching at the FBM.

Governance

The FBM is governed by the **Management Board** of UNIL-CHUV, in which the Rector of UNIL and the General Manager of CHUV sit and to whom the Dean reports.



The **Deanship** includes the Dean and four Vice-Deans, who take charge, respectively, of the subdivisions for Research, Teaching, Academic positions and Fundamental Sciences, as well as the Faculty Administrator. Furthermore, the FBM is divided into two administrative divisions: the Section of Fundamental Sciences and the Section of Clinical Sciences.

Section of Fundamental Sciences (SFS)

The Section of Fundamental Sciences, which is governed jointly by a President and a Vice-President, includes biology and basic medical sciences.

The following departments are part of the Section of Fundamental Sciences:

- The Centre for Integrative Genomics (CIG)
- Department of Biochemistry (DB)
- Department of Cell Biology and Morphology (DCBM)
- Department of Plant Molecular Biology (DPMB)
- Department of Ecology and Evolution (DEE)
- Department of Medical Genetics (DMG)
- Department of Fundamental Microbiology (DFM)
- Department of Pharmacology and Toxicology (DPT)
- Department of Physiology (DP)
- Institute of Biotechnology (IBT).

Section of Clinical Sciences (SCS)

The Section of Clinical Sciences is made up of departments and institutes that are active in the fields of somatic medicine, psychiatric medicine and community medicine.

The Section of Clinical Sciences is governed, in accordance with current regulations, by the Director of medical programmes at CHUV.

The following departments are part of the Section of Clinical Sciences:

- Department of Locomotor System (DLS)
- Department of Interdisciplinary Centres and Medical Logistics (DICML)
- Department of Gynaecology-Obstetrics and Genetics (DGOG)
- Department of Paediatric Medicine and Surgery (DPMS)
- Department of Medicine (DMI)
- Department of Clinical Neurosciences (DCN)
- Department of Psychiatry (DP)
- Department of Pathology and Laboratory Medicine (DPLM)
- Department of Medical Radiology (DMR)
- Departments of Surgery and Anaesthesiology (DSA)
- University Department of Community Medicine and Health (UDMCH).

The four Schools may draw their teachers from both sections.

Faculty Council

The FBM has a **Faculty Council**, the prerogatives of which are set out in the Law governing the University of Lausanne, the Internal Regulations of the UNIL, as well as the Faculty Regulations approved by the Board of Directors. The Faculty Council has 44 members, of which:

- 18 are members of the professoral staff (10 members of the SCS and 8 members of the SFS)
- 8 are members of the intermediate academic staff (4 members from each section)
- 6 are members of the administrative and technical staff
- 12 are members of the student body (8 students from the School of Medicine and 4 students from the School of Biology).

Finally, the Faculty Assembly is composed of members from the faculty community, which includes members of the academic staff, members of the intermediate staff (including staff funded by private sponsors), administrative and technical staff, as well as regularly enrolled students.

→ FBM Regulations: www.unil.ch/fbm/page2858.html

2 The Schools of the FBM and their curricula

The Deanship of the FBM, through its Teaching division, supervises four Schools, each governed by a Director:

- School of Biology
- School of Medicine
- Doctoral School
- School of Postgraduate Medical Studies.

Furthermore, an Education unit is directly attached to the Deanship and provides teaching support to the Schools.

Each School is in charge of planning, executing and assessing its teaching, under the supervision of its respective School Council. Coordination between Schools is administered by a working group, the Office for Coordination of Faculty Teaching (Bureau de Coordination des Enseignements Facultaires, BCEF), which is chaired by the Vice-Dean for teaching and staffed by the directors of the Schools and representatives from the Education unit.

2.1 School of Biology (SB)

The School of Biology is governed by:

- its Director
- The Council of the School of Biology (CSB).

The Director's term of office is 4 years, which can be renewed twice. The mission of the School of Biology is to organise and manage undergraduate biology studies.

The Council of the School of Biology is made up of:

- the Director of the SB
- one representative from each department in the Section of Fundamental Sciences
- a representative from the CHUV
- two representatives who are biology assistants
- two representatives who are biology students
- one representative who is a pharmacy student
- one representative from the Education unit for the SB.

The following are permanent members of the CSB:

- the assistant to the Vice-Dean of teaching
- a representative from the School of Pharmacy of Genève-Lausanne (appointment in accordance with the Council's agenda).

→ Regulations of the School of Biology: www.unil.ch/ecoledobiologie/page80110.html

→ Website of the school: www.unil.ch/ecoledobiologie

Biology curriculum

The Biology curriculum provides students with a wealth of knowledge in the biological sciences, ranging from molecules inside the cell to species in their communities. It consists of a three-year Bachelor's degree plus 3 separate Master's degrees lasting 18 months, all of which are taught in English.

2.1.1 Bachelor of Science in Biology

The studies leading to the Bachelor of Science (BSc) in Biology provide the broadest possible overview of the different domains of biology and of the different levels of organisation of living beings, from molecules to ecosystems. The studies are spread out over 3 years (6 semesters) and are interspersed with exams. Passing these exams is a prerequisite for progressing to the next year.

The Bachelor's degree course in biology for the 2009-2010 academic year has already been completely reformed. The disciplines and topics of which the course is composed are listed in the table on the following page.

- 1st year:
- Basic sciences
 - Cell biology and diversity of living beings.
- 2nd year:
- Forms of organisation of living beings
 - Knowledge of genetics, biochemistry and physiology
 - Biology of organisms and populations
 - Statistical and experimental design tools
 - Optional taught modules that allow students to broaden their horizons or to improve their knowledge in a particular domain.
- 3rd year:
- More specialised teaching in the fields of molecular and cell biology, and in the fields of evolution and biology of populations
 - Methodological knowledge
 - Practical work (PW) in molecular biology
 - Specialised topics with a choice of classes from a range of optional modules.

Throughout the course, the module on "Biology and society" provides students with a general overview of the social and historical development of scientific knowledge, an awareness of its dynamic and ethical aspects, and a critical reflection on its role within society.

The Bachelor's degree course in biology

| EXAMEN DE TROISIÈME ANNÉE | | | | | | |
|-----------------------------|---|---------------------------|--|---|--|---|
| 6 ^e semestre | 3 modules optionnels thématiques à choisir dans les domaines suivants 45% Ecologie et comportement, Bases moléculaires du développement et évolution, Génétique et évolution des génomes, Physiologie des systèmes complexes, Biodiversité et habitats, Techniques d'investigation fonctionnelle, Signalisation et interactions cellulaires entre organismes | | | | | Enseignements optionnels Enseignements choisis librement dans l'offre de l'Ecole de biologie ou dans celles d'autres facultés de l'UNIL ou d'autres hautes écoles de niveau universitaire 20% |
| 5 ^e semestre | Enseignements obligatoires théoriques et méthodologiques 32% | | | TP de biologie moléculaire 13% | | |
| EXAMEN DE DEUXIÈME ANNÉE | | | | | | |
| 4 ^e semestre | Développement 8% | Biologie et société 3% | Sciences de base Physique, Statistiques, Design expérimental 21% | Biochimie, biologie cellulaire Biochimie des protéines, Biochimie du métabolisme 12.5% | Physiologie Immunologie, Physiologie animale, Physiologie végétale 16% | Microbiologie, Génétique Microbiologie des procaryotes, Bioinformatique, Génétique des bactéries, etc. 21% |
| 3 ^e semestre | | | | | | |
| EXAMEN DE PREMIÈRE ANNÉE | | | | | | |
| 2 ^e semestre | Sciences de base Mathématiques, Physique, Chimie 42% | | | Biologie cellulaire et tissulaire, Génétique Biochimie, Génétique, Biologie cellulaire et moléculaire, histologie 32% | Diversité du vivant Zoologie, Botanique, Microbiologie 21% | Biologie et société 2,5% |
| 1 ^{er} semestre | | | | | | |

Governance

The various subjects taught as part of the Bachelor's degree in Biology are grouped into eight thematic areas. A director is appointed for each course of study, who manages teaching within his or her course of study.

→ See the list of course directors of the Bachelor's degree on page 34.

The course directors for the Bachelor level have the following duties, which must be carried out in coordination with the Board of Directors of the School of Biology:

- Organise teaching within their department.
- Monitor the quality of teaching and consistency within the department, in accordance with the objectives of the reform of the Bachelor's degree in Biology, and on the basis of the programme assessments.
- Ensure that there is an effective transfer of information with and between teaching staff employed in the department.
- Participate in group thinking sessions regarding measures to improve the curriculum of the Bachelor's degree in Biology.

The following tasks must be performed throughout the academic year:

- Review the findings of the assessments with the relevant teaching staff and, if necessary, suggest improvements for the following year.
- Inform the School of Biology of specific requirements in terms of equipment (equipment for practical work, audiovisual equipment, IT equipment, etc.).
- Ensure that the department's teaching specifications are up-to-date.
- Support the successful integration of new teaching methods or new teaching staff.
- Remain at the disposal of the School of Biology for monitoring of the unfolding of the year.

The School of Biology is responsible for supervising and monitoring each year of the Bachelor's degree. It organises assessments each year and communicates the overall and specific results to each head of department. Each head of department should therefore be able to carry out an appraisal year on year, and also have an overview of the three years of the Bachelor degree.

Teaching staff are responsible for the following: A detailed description of each module must be provided to UNIL students or external students. This detailed description allows them to have an idea of the contents and aims of the module, as well as any prerequisites linked to the module. There is a French version and an English version available for each section. This detailed description is all the more important when choosing optional modules, and therefore it must be updated or completed each year, if necessary.

2.1.2 Masters of Science in Biology

The School of Biology offers three types of Master of Science degrees in Biology (MSc), each worth 90 ECTS:

- A. Master of Science in Behaviour, Evolution and Conservation
- B. Master of Science in Medical Biology
- C. Master of Science in Molecular Life Sciences.

The course of study leading to the award of each Master is spread out over 3 semesters and teaching is carried out in English. The subjects studied in the first 2 semesters are assessed

by means of written and/or oral exams or in the form of continuous assessments, and are worth 45 ECTS credits. The dissertation corresponds to 45 ECTS credits, half of the 90 credits required to obtain the Master's degree.

The dissertation, which can take up to 2 semesters, consists of personal research undertaken under the responsibility of a supervisor (a member of the teaching staff, or any person who holds a doctorate and carries out teaching, subject to the authorisation of the School of Biology).

A. Master of Science in Behaviour, Evolution and Conservation

This Master combines a state-of-the-art approach in ecology and evolutionary and behavioural sciences, with the option of studying local fauna and/or flora.

The first semester of studies consists in a core curriculum that deals with conceptual and methodological aspects and is made up of compulsory modules (mathematics/statistics, molecular genetics, scientific papers, seminars at the Department of Ecology and Evolution) and optional modules (choice of 3 modules among the 6 modules offered: evolution, population genetics, socio-biology, behavioural ecology, spatial analyses and phytogeography). The second semester consists of field work and optional modules in the areas of evolution and conservation biology. The third semester is dedicated to the completion of personal research work.

The programme of the Master of Science in Behaviour, Evolution and Conservation is defined by the course director, who agrees teaching methods with his or her teaching team, in collaboration with the Board of Directors of the School of Biology.

B. Master of Science in Medical Biology

This Master's degree is designed for students who are interested in biological research in the field of medicine.

The first semester forms an introduction to human biology in a wider sense, tackling basic cell functions and systems for the transmission of signals within and between cells, as well as normal and pathological functions of the major systems in the human body.

The second semester offers a choice of four specialisation courses: Immunology and Cancer, Metabolism, Neurosciences and Pharmacological sciences. Each course is entirely autonomous from the other courses.

The third semester is dedicated to the completion of personal research work.

The programme for the Master of Science in Medical Biology is defined by its appointed course director, who coordinates general teaching for the Master with each director of the four courses of study, in collaboration with the Board of Directors of the School of Biology (see practical information).

C. Master of Science in Molecular Life Sciences

This Master's degree focuses on biology, from its molecular and mechanistic aspects, to the interaction of organisms (animals, plants and micro-organisms) with their environment.

The first semester involves multidisciplinary work, independently and in groups. All students participate in genome sequencing classes and classes for writing scientific papers and giving presentations. Thanks to a comprehensive choice of modules, students acquire a robust knowledge in molecular genetics, cell biology and developmental biology, genomics, bioinformatics and biotechnology. An initial work placement in the laboratory, participation in

seminars and an introduction to bibliographical work completes the training required for undertaking research work.

During the second semester, students use the techniques of comparative genomics in order to annotate a genome sequenced from scratch. They also draft a request for a research grant. The curriculum offers a large range of modules to choose from, including the option of choosing some of the modules from the Master in Behaviour, Evolution and Conservation. Depending upon the modules chosen, the student can specialise in the following research areas: Signals and genetic regulation, Genomics and quantitative genetics, Plant biology, Microbiology, Development and Metabolism. Students then begin their personal research. This research leads to the writing of a dissertation, which is then defended in front of a board of examiners during the viva examination.

The programme of the Master of Science in Molecular Life Sciences is defined by the course director, who agrees teaching methods with his or her teaching team, in collaboration with the Board of Directors of the School of Biology (see practical information).

→ Contacts: see the list of directors of masters and course directors on p. 34-35.

2.1.3 1st year of the Bachelor of Science in Pharmaceutical Science

The aim of the School of Biology is also to organise modules and exams for first-year students studying for a Bachelor of Science in Pharmaceutical Science. Since the start of the new 2010-11 academic year, following the repeal (on 31 December 2010) of federal ordinances, the supervision of these studies will be carried out by means of a set of regulations for studies drawn up by the School of Biology.

The School of Biology does not award a grade for this first year of studies in pharmaceutical science; nevertheless, it provides students with a document certifying the marks and ECTS credits obtained.

→ www.unil.ch/ecoledobiologie/page79944.html

2.1.4 Exams within the School of Biology

Within the School of Biology, exams are organised over three sessions: The winter session for modules taught during the autumn semester, the summer session for modules taught during the spring semester, and the autumn semester for re-sits. At the Master level and for practical tests, marks may be awarded during the semester.

The following testing methods are used: written – MCQ – oral – practical, with the option of combining several different methods in order to decide the final mark (for example, by taking into account the mark for practical work with the written examination).

The methods and equipment permitted during tests, as well as the conditions that need to be fulfilled in order to sit exams, are listed in a table entitled "Exam procedures". This table is made available to students at the beginning of the year (at the beginning of the semester for third-year Bachelor modules and Master students) and contains all the relevant rules and regulations. In principle, this table cannot be modified during the year.

Test marks range from 1.0 to 6.0. The pass mark is 4.0. A mark of 1.0 represents a fail for compulsory modules at Bachelor level.

Practical aspects

Teachers responsible for exams for modules within the School of Biology will be contacted by the School regarding the following points:

- Approval of the table "Exam procedures" at the beginning of the year

- Approval of the timetable for exams during the session in the middle of the semester
- Organisation of tests (questions + monitors) 1-2 weeks before the session
- Test marks during and after the session.

There is an “Examination procedure” that summarises the different administrative processes linked to exams in the School of Biology, which is available on the page “FAQ teaching staff” on the School of Biology’s website.

→ Contact address for exams at the SB: biologie-examens@unil.ch.

2.2 School of Medicine (SM)

The School of Medicine is governed by:

- its Director
- its Vice-Director
- and the Council of the School of Medicine (CSM).

The Directors’ term of office is 4 years, which can be renewed twice. The Director is elected by the Faculty Council, the Vice-Director by the Deanship. The Director chairs the CSM.

The Council of the School of Medicine is made up of:

- the Director of the SM
- the Vice-Director of the SM
- one representative from each department that makes a significant contribution to teaching
- one representative from the Swiss Association of Junior Doctors, section of Vaud (ASMAV, Association des médecins assistants – section Vaud)
- two student representatives (President and Vice-President of the Advisory Committee of Medical Students)
- one representative from the University Institute of General Medicine (Institut universitaire de médecine générale, IUMG).

The following are permanent members of the CSM:

- the Vice-Dean of teaching
- the Assistant of the Vice-Dean of teaching
- the Head of the Education unit
- the chairpersons of the teaching committees (Skills Committee, MICS² and e-Learning)
- the heads of course year
- one representative from the University Institute of Teaching and Research in Nursing Sciences (Institut universitaire de formation et recherche en sciences infirmières, IUFRS)
- the Director of the CEMCAV.

→ Website of the School of Medicine: www.unil.ch/fbm/page2315_fr.html

→ Regulations of the School of Medicine: www.unil.ch/fbm/page58920.html

2.2.1 Organisation of the medicine curriculum

The curriculum of the School of Medicine is organised in accordance with the reform plan that was launched in 2004 and covers six years of study. It is organised in modules that bring together disciplines around a subject area (organ-system, pathology, skills). In accordance

² MICS program, for Medicine: Individual-Community-Society.

with the Bologna process, the programme is divided into two study periods: the Bachelor's degree in Medicine, which is a propedeutic course from basic sciences to clinical sciences, and the Master's degree in Medicine, which focuses on clinical teaching and experiences in a hospital environment.

Modules

The teaching unit in this reformed course is the module. One year is subdivided into 5 to 9 modules, each focusing on a given topic. Most of the modules are in consecutive order and last on average 3 to 5 weeks. Some of them are longitudinal, meaning that they are spread out over the entire year, taking up half a day or one day per week.

Each module is worth a number of ECTS credits, which is determined according to the estimated workload (structured teaching and independent work) required for the students to complete the module. These credits are awarded to students who have successfully passed the module. One or more forms of examination are used in each module, which allow assessors to determine whether or not the teaching objectives have been achieved by the student and to award credits.

Thematic content of modules – connections between disciplines

The curriculum is based on an integrative approach, grouping together several disciplines around a central theme, for instance a symptom ("abdominal pain"), a system-organ ("respiration, circulation") or a clinical entity ("mother-child"). This thematic organisation can be found in all Swiss medical schools and offers several advantages:

- The clinical context: A multidisciplinary approach enables a more appropriate, integrated understanding (learning about the cardiovascular system by incorporating anatomy, physiology and biochemistry is more effective than studying each subject separately).
- Flexibility: A balance in the teaching of clinical and fundamental notions can be achieved in a more progressive manner, enabling the introduction of clinical bases early on in the course (motivation, justification, illustration) and also ensuring that relevant basic sciences can be studied again in later years.
- Repetition: a discipline will be taught at several stages of the course, in order to reactivate previously acquired notions and ensure improved overall contextualisation.

This approach requires the persons in charge of the discipline to explain clearly their learning objectives and think both in terms of sequence over the entire learning period and in terms of interaction with other disciplines around existing themes.



In order to guarantee coherent teaching, teachers must communicate at the start of each module the objectives that they would like their students to pursue. Exam questions must be prepared on the basis of these very same objectives. Teaching aids (cf. sections 4.2 to 4.4) provided to students are intended to support them in acquiring the knowledge and skills that are required in order to meet these objectives.

From the third year of the Bachelor degree and particularly during Master years, teaching must be based on the Swiss Catalogue of Learning Objectives (SCLO).
→ www.smifk.ch

The latter defines the objectives that the Swiss Confederation believes students must have achieved by the end of their training, which will be tested in the federal examination for the award of the medical degree. Teachers are obliged to refer to this tool and give guidance to their students, by citing which of the SCLO's objectives they will be targeting in the module.

Governance

This matrix organisation between modules and disciplines requires a high degree of coordination. Each module is steered by a module director who organises the learning objectives and teaching in accordance with the theme chosen by the CSM and in collaboration with the year directors and the subject directors. According to the teaching requirements for the module, teachers are subsequently recruited from the two sections of the FBM or from other Faculties of the UNIL, or even from established medical practices or regional hospitals.

2.2.2 Bachelor of Medicine

The university Bachelor's degree in Medicine provides basic training in medicine. It commences with an upgrade of knowledge of fundamental sciences and an introduction to their application in medical training, up to the teaching of propedeutic bases in clinical sciences.

1st year of the Bachelor's degree in Medicine (BMed1)

This year of studies combines teaching of fundamental sciences (physics, chemistry, statistics) applied to medical studies, with an introduction to biomedical sciences (biochemistry, morphology, physiology). Teaching is structured on the principle of developing knowledge, which begins at the level of the material constituents and progressively becomes more complex with the study of the cell, its differentiation into organs and systems, up to the individual and its interactions in society. The last module provides an introduction to medical humanities and public health.

2nd year of the Bachelor's degree in Medicine (BMed2)

This year of studies combines teaching of biomedical sciences with initial notions in clinical sciences. Six transversal modules focus on multidisciplinary teaching by systems and systemic organs of the human body. This teaching aims to impart knowledge of basic biomedical sciences, which form the basis for the fundamental principles of knowledge of physiopathology. The latter are illustrated by lecturers who are also clinicians during the second year, and by means of teaching in small groups (Learning by problem), where clinical scenarios are used as a springboard to reflect on physiological and physiopathological mechanisms associated with a given pathology or organ.

3rd year of the Bachelor's degree in Medicine (BMed3)

This year of studies consolidates propedeutic teaching in medical branches for fundamental disciplines. Modular teaching is also multidisciplinary and organised by system-organ. The transversal branches such as pharmacology, pathology, radiology and physiopathology are spread out over different modules. The year ends with a community immersion module, during which students carry out investigations in small groups on chosen topics of public health, ethics and medical humanities. The module ends with an oral presentation and the publication of a scientific poster.

Parallel teaching to the Bachelor's degree in Medicine

Starting from the 1st or 2nd year, and throughout the Master's programme, three parallel modules complete the training:

- A module entitled "Medicine: Individual, Community, Society" (MICS), which aims to integrate population medicine, epidemiology, humanities and primary care medicine³ and associated subjects to the topics discussed in transversal modules.

³ Teaching of primary care medicine is coordinated with the support of the University Institute of General Medicine (Institut universitaire de médecine générale, IUMG).

- A module entitled “Clinical skills (SKILLS)”, which combines courses, practical exercises, visits at GPs’ surgeries and training sessions with patient simulation (patient history, physical examination of the patient, auscultation, etc).
- A module entitled “Optional course”, which offers students the possibility of broadening their knowledge in fundamental or clinic areas of medicine, according to their own interests and any plans they may have for postgraduate training.

Study plan for the Bachelor’s degree in Medicine

| | Semestre d’automne | | | Semestre de printemps | | |
|------------------------------------|---|---|---|--|--|---|
| Bachelor 3 ^{ème} année | B3.1 Cœur, poumons 5 sem, 8 ECTS | B3.2 Douleurs abdominales 4 sem, 7 ECTS | B3.3 Inflammation 5 sem, 8 ECTS | B3.4 Fonctions sup. du système nerveux 5 sem, 8 ECTS | B3.5 Croissance et développement 5 sem, 8 ECTS | B3.6 Immersion Communautaire 4 sem, 7 ECTS |
| | B3.7 « Médecine: Individu – Communauté - Société » – 5 ECTS | | | | | |
| | B3.8 Compétences cliniques – 6 ECTS | | | | | |
| | B3.9 Cours à option – 3 ECTS | | | | | |
| Bachelor 2 ^{ème} année | B2.1 Cellules, organes, systèmes 4 sem, 7 ECTS | B2.2 Sang, immunité, infection 5 sem, 10 ECTS | B2.3 Neurosciences 5 sem, 10 ECTS | B2.4 Respiration, circulation 5 sem, 10 ECTS | B2.5 Digestion, métabolisme 4 sem, 7 ECTS | B2.6 Système urogénital et homéostasie 5 sem, 10 ECTS |
| | B2.7 « Médecine: Individu – Communauté - Société » | | | | | |
| | B2.8 Compétences cliniques – 5 ECTS | | | | | |
| | B2.9 Cours à option – 1 ECTS | | | | | |
| Bachelor 1 ^{ère} année | B1.1 La Matière 9 sem, 16 ECTS | | B1.2 La Cellule 5 sem, 11 ECTS | B1.3 Développement 5 sem, 11 ECTS | B1.4 Système locomoteur 5 sem, 11 ECTS | B1.5 Méd.: Individu-Commun.- Société 4 sem, 11 ECTS |

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- Regulations for the Bachelor of Medicine: www.unil.ch/fbm/page58920.html
 → List of module directors for the Bachelor of Medicine, page 37.

2.2.3 Master of Medicine

The university Master degree programme in Medicine continues and completes training, as a priority in the area of clinical disciplines. It includes, in particular, two work placements in a healthcare environment (hospitals, GPs’ surgeries) as well as personal research (dissertation).

1st year of the Master’s degree in Medicine (MMed1)

This year of studies begins with a semester of teaching in disciplines that have not yet been tackled during the Bachelor. The second semester is devoted to the introduction of the dissertation, with a module on methodological training that targets the type of research (clinical or fundamental research) chosen by the student for his or her personal project. The year ends with a work placement in clinical services during rotations programmed over 16 weeks (block courses). During this last period, the student becomes acquainted with labour organisation in a medical service and the different stages of patient care.

2nd year of the Master's degree in Medicine (MMed2)

This second year of studies begins with a module focusing on the approach of general practitioners in primary healthcare. This is followed by four clinical teaching modules that emphasise the therapeutic care of patients with complex pathologies (diabetes, psychiatric illnesses, cancers and palliative care), techniques for genetic diagnosis and prescription of medication. It ends with a second module on "general practice". This module prepares students for the clinical work placements that they will undertake during the following year. The modules include free afternoons during which students can work on their dissertations.

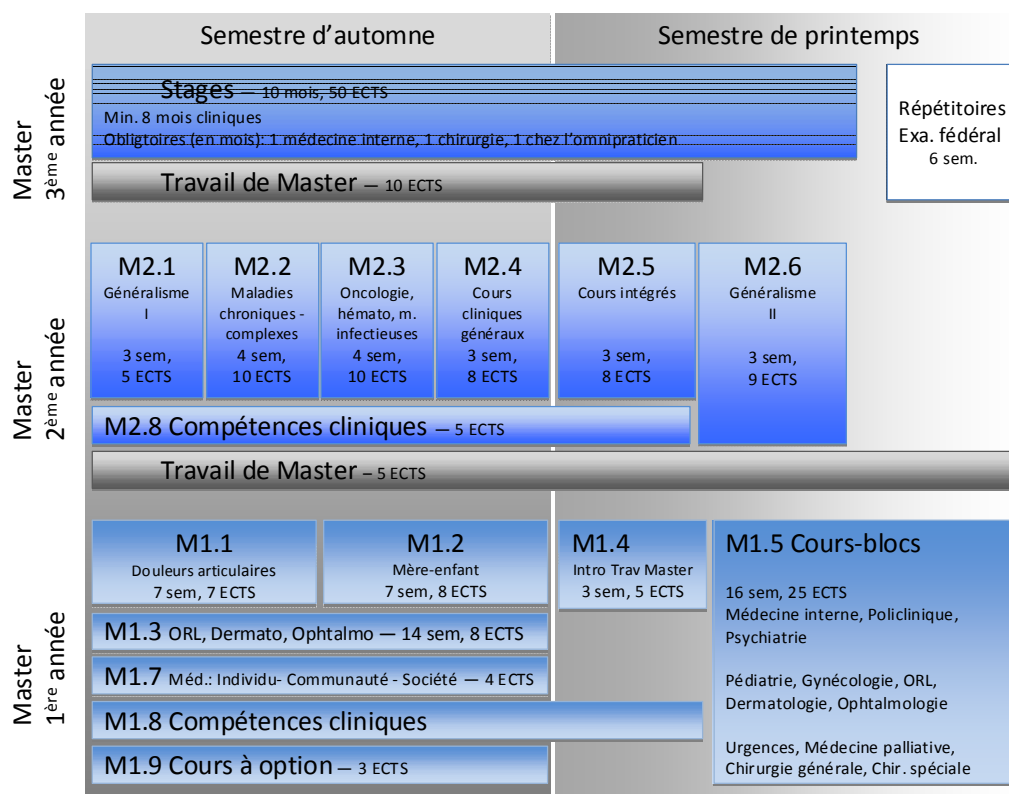
3rd year of the Master's degree in Medicine (MMed3)

This year of studies is devoted entirely to clinical work placements. Students complete work placements lasting 1 to 3 months in various medical services, for a total of 10 months, with compulsory internships in internal medicine and surgery, and strongly recommended internships in psychiatry and paediatrics. As a whole, students must devote at least 8 months out of 10 to clinical work placements, with the freedom of spending the remaining placement period either by completing further clinical training or basic research (particularly if they intend to pursue a career in research after sitting the federal medical exam). The placement year also enables students who have not yet completed their dissertation to do so.

Parallel teaching to the Master's degree in Medicine

During the first year, teaching of the MICS module is carried out in the field of community medicine, occupational health and health economics. At the same time, teaching by the patient's bedside or at a GP's surgery enables consolidation of learning of clinical competencies for medical history and status. Finally, optional modules give students the opportunity to explore a different subject in which they are interested for their postgraduate training orientation.

Study plan for the Master of Medicine



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- Regulations for the Master of Medicine: www.unil.ch/fbm/page58920.html
 → List of module directors for the Master in Medicine, page 38.

At the end of their medical studies at the University of Lausanne, students are awarded a Master's degree in Medicine. This diploma entitles them to sit the federal medical exam. Once the student passes this federal exam, he or she is awarded the Federal Doctor's Diploma.

2.2.4 Exams within the School of Medicine and validation of courses in small groups

The examination methods are largely dependent on the content and form of the courses. A particular effort is made to guarantee the quality and relevance of the questions, especially at Master level, with the aim of preparing students for a complex and multidisciplinary medical activity.

Written exams, in the form of MCQs (multiple choice questionnaires), are regularly used to assess students' knowledge. Questions are compiled by the teaching staff and must coincide with the objectives announced at the beginning of the module. They are subsequently read by a review committee within the School. SCT⁴ exams, which are used more rarely, are tests made up of sophisticated clinical questions, for which practitioners give advice for reference. An assessment is subsequently carried out to ascertain whether the student has chosen the response that is closest to the one given by the practitioners or the one that is furthest removed.

The majority of optional modules are validated by a mini-dissertation that is judged adequate or inadequate. Students are offered an opportunity to undertake remedial work. ECOSs (examen clinique objectif structuré, structured objective clinical exams), for their part, are exams that take place at several posts or stations, each testing a specific area of clinical competences or know-how, generally in the presence of a standardised patient.

Finally, a written dissertation is submitted at the end of the course, the content of which is assessed based on a standardised scale. A viva in front of the course director and an external assessor completes the assessment, with the possibility of resubmission in this case too.

→ Medical exams: www.unil.ch/fbm/page2326.html

→ Workshops for preparing for exams: Raphael.Bonvin@unil.ch

Validation of work in small groups

Lectures are generally assessed by means of MCQs and/or oral exams, which is not the case for work in small groups. Under exceptional circumstances, the active participation of students leads in itself to the award of one or more credits, but this attendance must be certified. Students must have **an attendance list** filled in. The teaching staff's signature validates the award of credits.



It is the responsibility of the teaching staff participating in any course held in small groups to sign attendance certificates, ensuring that the quantity of forms submitted corresponds to the actual number of students present.

Students who are missing a significant number of signatures do not receive their credits and must repeat certain modules during the following year. In order to ensure fairness, it is necessary for the same rules to be applied to all of the students involved.

⁴ Script Concordance Test.

2.2.5 Master of Science in Nursing Sciences

The University of Lausanne and the University of Applied Sciences Western Switzerland offer a joint Master's degree in Nursing Sciences. It is administratively attached to the School of Medicine of the FBM.

Under the auspices of the University Institute of Training and Research in Care (Institut universitaire de formation et de recherche en soins, IUFRS), the aim of this programme is to train future graduates so that they can exercise the role of experts, in order to optimise the quality of care and patient safety, as well as to guarantee efficient use of resources. This Master's degree is spread out over 4 semesters and is worth a total of 90 ECTS credits. It is open to anyone who has training in nursing (Bachelor in Nursing or HES nursing diploma) and at least two years of professional experience.

→ Website: www.unil.ch/sciences-infirmieres

→ Contacts: see practical information on p. 38.

2.3 Doctoral School (DS)

The aim of the Doctoral School is to manage doctoral courses of study in clinical sciences and fundamental sciences.

The Doctoral School is governed by:

- its Director
- the Council of the Doctoral School (CDS).

The Director's term of office is 4 years, which can be renewed twice. The term of office for members of the School Council is 2 years, which can be renewed twice at the most.

The Council of the Doctoral School is made up of:

- The Director of the DS
- Representatives from the various departments within the Faculty
- The heads of the doctoral courses of study
- The heads of the doctoral programmes
- The chairs of the permanent committees
- 4 representatives from the intermediary staff.

The Director of the Doctoral School is supported by various permanent Committees:

1. Committee of the Doctorate in Life Sciences (PhD) made up of:

- The Director, who chairs the Committee
- Representatives from the Faculty teaching staff.

2. Committee of the Doctorate in Medicine (MD), made up of:

- The Director, who chairs the Committee
- Representatives from the Faculty teaching staff.

3. Committee of the MD-PhD UNIL-EPFL, made up of:

- A President
- 5 representatives of the Faculty, including 3 from the SFS
- 3 representatives from the EPFL
- Guests from partner disciplines.

The Doctoral School organises an international competition for the award of PhD scholarships funded by the Faculty. A selection committee bringing together representatives from the SFS and SCS departments of the Faculty supports the Doctoral School during the selection procedure.

The Selection Committee for the competition for the award of PhD scholarships is made up of:

- A Chairman (the Director of the DS)

- Representatives from the departments within the Faculty.

→ Website of the Doctoral School: www.unil.ch/edfbm

→ Regulations of the Doctoral School: www.unil.ch/edfbm/page80215.html

2.3.1 Curriculum of the Doctoral School

The Departments of the FBM offer a broad range of positions for PhD students. Their training benefits from the close collaboration between clinical and fundamental research: A good number of theses in fundamental sciences are carried out in clinical sciences laboratories, and research in clinical sciences benefits from the competencies and technical platforms developed by fundamental sciences.

Each doctorate is governed by specific regulations that describe the thesis procedure and, in some cases, the requirements of the associated doctoral programme. Directives giving more precise indications on the thesis procedure and the doctoral programme are normally attached to the regulations. Five doctorates are currently offered to students:

- Doctorate in Medicine (MD)
- Doctorate in Medicine and Life Sciences (MD-PhD)
- Doctorate in Life Sciences (PhD)
 - General doctoral programme in Life Sciences
 - Thematic doctoral programmes
 - ▶ Ecology and Evolution
 - ▶ Cancer and immunology
 - ▶ Cardiovascular and Metabolism
 - ▶ SIB Training Network
- Doctorate in Neurosciences (PhD)
 - Lemanic Neuroscience doctoral programme
- Doctorate in Nursing Sciences (PhD)

A PhD generally takes 3 to 5 years to complete and an MD doctorate corresponds to one year of full-time research.

Teaching activities at the doctoral level consist of:

- Direction or co-direction of the thesis
- Chairing of and participation in the committees and thesis juries
- Participation in teaching across various doctoral programmes.

In order to participate in teaching, eligibility as thesis's director must be confirmed by the Doctoral School.

Teaching staff may also be called upon to participate in various committees that manage doctoral activities and in working or thinking groups.

The secretariat of the Doctoral School makes available to Faculty teaching staff the various regulations, directives and administrative documents relating to doctoral studies, and responds to all queries relating to the participation of teaching staff in various teaching activities.

→ Doctorate in Life Sciences (PhD): www.unil.ch/edfbm/page79136.html

→ Doctorate in Medicine (MD): www.unil.ch/edfbm/page79134.html

→ Doctorate MD-PhD UNIL-EPFL: www.unil.ch/edfbm/page79135.html

→ Doctorate in Neurosciences: www.unil.ch/ln

→ Doctorate in Nursing Sciences: www.unil.ch/sciences-infirmieres

- Doctoral programme in Cancer and Immunology: www.unil.ch/cancer-immunology
- Doctoral programme in Ecology and Evolution: www.unil.ch/ee
- Doctoral programme in Cardiovascular and Metabolism: www.unil.ch/edcvm
- Doctoral programme SIB PhD Training Network: www.isb-sib.ch/education/sib-phd-training-network/events.html
- Contacts: see practical information on p. 37-41.

2.4 School of Postgraduate Medical Studies

In order to provide quality training that meets the requirements of the Swiss Institute for Medical Postgraduate Education and Further Training (Institut suisse pour la formation médicale post-graduée et continue, ISFM)⁵ and developments in the professions, the foundation of a School of Postgraduate Medical Studies was high on the list of priorities of the CHUV, according to which education must meet the needs of the population, whilst also fulfilling the requirements for the functioning of hospitals and, finally, ensuring support is provided to academic promotion.

Placed under the joint control of the Direction of the CHUV and the Deanship of the FBM, the School of Postgraduate Studies ensures continuity between the undergraduate and postgraduate courses of study. Its role is also to validate the pedagogical aspects of teaching by means of continuous assessment carried out in collaboration with the FBM. A support system to improve adult pedagogy will be set up and new assessment tools will be introduced in the work environment.

2.4.1 Curriculum of the School of Postgraduate Medical Studies

The purpose of the School of Postgraduate Medical Studies, in collaboration with the medical discipline societies (MDS), is to provide structure to medical postgraduate studies. Its stated aim is to develop training programmes that can be adjusted in accordance with the needs of the chosen specialism. Following their adoption by the ISFM, these specialisation programmes will be based on a core curriculum made up of non-specific courses (ethics, health economics, pain management, etc.) recognised by the ISFM. Furthermore, each specialisation programme will offer four courses of study (academic, hospital-based, primary care and other). The importance accorded to each course of study within the education curriculum of a specialisation must be determined according to the specific requirements of this specialty and individual career objectives within this specialty, taking into account medical demographics.

→ [Contacts: see practical information on p. 41.](#)

⁵ ISFM: Independent institute of the Swiss Medical Association and body in charge of issues relating to postgraduate education and further training.

2.5 Education unit

The Education unit of the FBM was founded in 1994 and at that time it was attached to the Faculty of Medicine. It now serves the 4 schools within the FBM.

It is made up of:

- A head of the Unit
- A person in charge of module assessments
- A pedagogical engineer
- A docimologist
- A skills coordinator (for medicine)
- A person in charge of the standardised patients programme (for medicine)
- A pedagogical and research coordinator (for medicine)
- An administrative manager.

Two pedagogical assistants from the School of Biology regularly participate in the Education Unit's activities.

These professionals – doctors, didactic biologists and psychologists – carry out four main tasks:

- They provide pedagogical support to teachers and Schools within the FBM.
- They carry out assessments of modules and of individual performances by teaching staff
- They provide individual pedagogical support when requested by the teaching staff and, in the case of doctors, they carry out assessments of clinical skills
- They provide support during the development and application of new teaching technologies and in particular of e-Learning.

The Education unit, in collaboration with the Teaching Support unit (Centre de soutien à l'enseignement, CSE) of the UNIL carries out assessments of teaching at the FBM. According to their geographical location, teachers of the FBM may turn, preferably, to the following:

- Dorigny site, School of Biology:
 - Teaching Support unit of the UNIL
 - Pedagogical counsellor of the School of Biology
- Bugnon site, Epalinges, School of Medicine:
 - Education unit of the FBM.

→ Website of the Education unit – FBM: www.unil.ch/fbm/page2332.html

→ Teaching Support unit – UNIL: www.unil.ch/cse

→ Contacts: see practical information on p. 41-42.

3 Directives to holders of academic titles

Undergraduate and postgraduate teaching activities include the following:

- Structured teaching: Ex cathedra courses, seminars, exercises, practical work, field work, teaching in small groups; these various activities include teaching preparation and tasks linked to exams.
- Supervision of personal coursework: essays, dissertations for the award of diplomas or Master's degrees, doctoral theses, other individual coursework.
- Organisation of teaching: responsibility for a programme, organisation of modules, advice to students, and so on.

3.1 Specifications for teachers at the SFS

All teaching staff at the Section of Fundamental Sciences within the FBM are administratively attached to the UNIL through their Departments. As a consequence, the regulations and directives of the UNIL also apply to teaching staff, especially with regard to teaching specifications.

A Section Council and an Office of the Heads of Departments participate in decisions regarding teaching and research within the SFS, and are involved in their implementation.

The UNIL has defined brackets, expressed as a % for full-time employment, for teaching activities. Below are the rates expressed in Directive 1.13 according to academic title:



| | |
|--|----------------------|
| Ordinary Professor | between 35% and 70% |
| Associate Professor | between 35% and 70% |
| Assistant Professor | between 20% and 50% |
| Type 1 Teaching and Research Fellow | between 20% and 80% |
| Type 2 Teaching and Research Fellow | between 80% and 100% |
| Assistant fellow | between 20% and 50% |

→ Directives of the UNIL: www.unil.ch/interne/page41076.html

Furthermore, the Heads of the Departments are in charge of distributing and checking teaching loads assigned to their academic associates, in accordance with the requirements of the Schools of the FBM and following consultation with the directors of the respective schools.

3.2 Specifications for teaching staff at the SCS

All teaching staff at the Section of Clinical Sciences within the FBM are administratively attached to the CHUV through their Service. In the event of academic questions, including teaching questions in particular, teaching staff must refer to the recommendations and directives issued by the Faculty Deanship.

The main directives are:



- The content of teaching must cover most of the learning objectives, as defined in the Swiss Catalogue of Learning Objectives (SCLO, available for download from: www.smifk.ch).
- All modules, with the exception of work placements and block courses, must be delivered in principle by holders of academic titles.
- Activities in small groups are divided among all of the clinician lecturers, including PDs* who are not teaching and research fellows.
- Lectures (*ex cathedra*) are preferably delivered by professors. Each lecturer must carry out at least 6-8 hours of teaching per year over the entire undergraduate medical curriculum.
- A lecturer from the SCS may be required to deliver up to 50 hours of teaching per year for undergraduate training.
- The Heads of Department and Service are in charge of allocating teaching duties among their colleagues, in accordance with their interests and pedagogical competencies, and of freeing them up for the time required for teaching.

4 Pedagogy

The FBM is actively involved in guaranteeing the pedagogical quality of the teaching it imparts. In addition to the assessments of teaching programmes that are regularly carried out in the faculty (see section 5), a series of recommendations are given in this handbook with regard to teaching aids, copyright and e-learning. Furthermore, the Education unit offers a range of general and in-depth training courses to teaching staff who would like to improve their skills.

4.1 Pedagogical training programmes

The Education unit and the Teaching Support unit offer workshops for pedagogical training tailored to the needs and experience of teaching staff at the FBM and the UNIL.

- **General training courses** offered by the Education unit are intended for all new teaching staff at the FBM, as well as for those who wish to acquire the tools that will enable them to gain a better understanding of their role and their function as lecturers.
 - The *orientation module*: specific to the FBM, it gives an insight into the institutional environment and the Schools within which the teaching staff will be working.
 - The *module "Introduction to University Pedagogy"* introduces the four main principles of pedagogy and tackles various topics, such as: teaching planning, the definition of learning objectives, etc.
- **In-depth training courses** enable teaching staff to tackle specific aspects in more detail (teaching assessment, supervision of individual work, e-Learning, etc.) according to their needs or interests.

Individual supervision and support are also offered on demand (first course, improvement following an appraisal, etc.).

Person in charge of training courses: Raphael.Bonvin@unil.ch

4.2 Teaching and learning aids

Pedagogical recommendations

From a pedagogical perspective, it is useful to distinguish between teaching aids and learning aids.

1. Learning aids (hand-outs, chapters from reference books, scientific articles) are documents with which the student works and which must facilitate independent learning. Learning aids must be linked to the learning objectives, as well as the assessment requirements.

2. Teaching aids ("PowerPoint", blackboard, Uniboard, films, etc.) are materials that the teaching staff use to support and illustrate their lessons. They are used only in the context of the presentation and are not conducive to learning in themselves.



The combination of teaching aids and learning aids supports the student in understanding the subject matter that is taught.

Lecturers are therefore expected to make learning aids available to students, as well as teaching aids.

In the case of modules that rely on online pedagogical activities, we recommend uploading the aids in a "Moodle" space. The pedagogical engineer of the Education unit offers individual support for the design and creation of a "Moodle" space (see contacts, Education unit).

Archiving of IT documents on MyUnil

Teaching and learning aids must be distributed through the MyUnil portal, in PDF format. Duplicates can also be handed out by the teaching staff on the same day as the class.



Lecturers are expected to make the learning aids and teaching aids available to students on MyUnil 48 hours before the start of each class.

All teachers have a UNIL login that allows them to connect to MyUnil. In addition, for the medicine course of study, one student per year has the duty and responsibility of uploading the documents on MyUnil and the teaching staff can also use the system to receive assistance.

- 1 Got to <http://my.unil.ch>
- 2 Log in (username/password of the UNIL e-mail account)
- 3 Click on the "course" tab
- 4 Select the relevant course from the list on the left
- 5 In the "document" window, select a sub-category, if applicable, then select a file on your local hard disk (button "choose file")
- 6 For the Medical School only: the teaching staff must choose appropriate key words among the list of key words that have been associated beforehand with the module in question.
- 7 Upload the file on MyUnil (send button).

Access to all teaching aids — research by key word

With a view to guaranteeing consistency in the subject matter that is taught, all teaching staff may from now on have unlimited access to all teaching aids uploaded on MyUnil, for the entire curricula of the School of Medicine and the School of Biology. In order to classify the modules and facilitate efficient searching, the Schools have each defined, in collaboration with the relevant teaching staff, key words that are associated with each module. This new option is also offered to students of the Faculty.

Please note that any lecturer who borrows an item for a lesson (slides, tables) from a colleague must respect the copyright by notifying the relevant teaching staff and by quoting the source.

→ MyUNIL help desk: www.unil.ch/ci/page33.html

→ Informatic Center UNIL (access to MyUNIL, login's loss): www.unil.ch/ci/page20.html

4.3 Designing teaching aids

Principles for the creation and good use of PowerPoint presentations

- Include in each presentation the title and date of the lesson, the name of the lecturer and a lesson plan
- Use a suitable number of slides for the duration of the lesson (a maximum of 20-25 slides for 45 minutes of teaching), and number the slides
- Convey one concept / one idea per slide, limit the text to key words and avoid phrases
- Use white backgrounds and a good balance of contrasts, in order to facilitate printing

- Avoid overloading the available surface (a maximum of 6-8 lines per slide)
- Keep the chosen layout throughout the presentation
- Use legible fonts (24 points minimum, classic fonts without serifs)
- Use illustrations and images that are clear and relevant
- Use progressive displays and animations in moderation
- Limit the colour palette to 3-4 different colours
- Display 6 slides per PDF page intended for printing if the original file is a PowerPoint file
- Compress scanned images in order to reduce the size of the files (maximum 5 Mo per file)
- Ensure that all sensitive information that could lead to the identification of a patient or other person has been deleted (watch out for initials, dates of diagnosis or of death!).

→ http://rcfe.epfl.ch/webdav/site/rcfe/shared/ABC-supports_visuels.pdf

Creating a PDF document

Any electronic document (Microsoft Office, OpenOffice, etc.) can be converted into a PDF document (Adobe Acrobat). This format can be read by any computer with any operating system (Mac OS X, Windows, Linux, Palm, etc.) whilst keeping the same layout as the original. This format should therefore be given priority for the distribution of electronic documents.

→ Reading and creating PDF documents: www.unil.ch/ci/page19455.html

4.4 Copyright in teaching

As a general rule, a work that is protected by copyright cannot be used without the author's permission (or that of the rights holder).

The law establishes certain limits that apply to copyright in well-defined situations. For example, the author's authorisation is not required for use in a strictly academic setting. In the case of distribution of pedagogical resources using the internet, the use of material subject to copyright must be restricted to the students on the course, meaning that the material must be distributed using a website that is password protected. The UNIL pays a fee every year for the use of audio/visual material for teaching purposes (this applies to anything that comes up in the context of the programme of studies).

A lecturer may decide to make his or her material freely accessible to the public if he or she holds the relevant copyright and if –in the case of medical resources – patient confidentiality is protected (in other words, the content is anonymous). In order to protect the lecturer's intellectual property, the material may be distributed, for instance, with a licence of the "creative commons" type, which encourages sharing of content whilst also limiting exploitation.

→ Swiss Federal Institute of Intellectual Property: <https://www.ige.ch/fr.html>

→ Suissimage (Swiss Authors' Rights Cooperative for Audiovisual Works) www.suissimage.ch

→ Educa.ch (copyright and education): www.educa.ch/dyn/115722.asp

→ Create Commons France: <http://fr.creativecommons.org/>

4.5 e-Learning

The Faculty strives for the progressive integration of new technologies within a **blended** teaching environment, or in other words, a teaching environment in which students are involved, enriched by e-Learning resources. **Based on the teacher's initiative**, this

approach provides an opportunity to reflect on the general design of teaching.

In order to support teaching staff in designing and creating e-Learning projects, the pedagogical engineer of the Education unit can provide support in the following aspects:

- Presentation and assistance with searching for existing examples of e-Learning in the field in question
- Assistance with designing and creating an e-Learning project
- Training in the use of the institutional platforms and tools available.

A request for financial support may be submitted to the Fund for Pedagogical Innovation (Fonds d'innovation pédagogique, FIP) of the UNIL.

An e-Learning Committee FBM-CHUV approves e-Learning projects funded jointly by the CHUV and the FBM, up to a maximum of 4 times at CHF 25,000 per year.

→ Contact the pedagogical engineer of the Education unit: Marc.Sohrmann@unil.ch

→ Fonds d'innovation pédagogique (FIP): www.unil.ch/fip

5 Assessment and valorization of teaching

At the Bachelor and Master level, two types of teaching assessments, based on feedback from students, are carried out at the FBM:

- **programme assessments** (consistent teaching units such as modules, semester-long courses, etc.) provide information to the persons in charge of teaching and the authorities responsible for governance on the consistency and content of teaching programmes and allow for improvements to be made, if necessary. These are carried out at the initiative of the Schools.
- **individual assessments** focusing on one course or complete area of teaching are carried out for teacher training purposes, as teaching staff are given feedback on their pedagogical qualities. The assessments are carried out at the request of teaching staff.

5.1 Assessment and remedial procedures

| | Programme assessment | Individual assessment |
|-------------------------|--|---|
| Responsibility | Under the responsibility of the Schools with the support of the Education unit | Under the responsibility of teacher , in accordance with UNIL Directive 1.16, with the support of the Education unit (medicine) or the Teaching Support center (biology) |
| Preparation | Questionnaire prepared by the Education unit in accordance with the requirements of the Schools | Questionnaire prepared by the Education unit / Teaching Support unit in accordance with the teaching staff's requirements |
| Assessment | Students assess the programme taught Teaching staff assess the management and organisation of the programme | Students assess the teaching staff's performance |
| Results | The Education unit sends the results to the programme director, the School governors and the student representatives, in the form of a report The programme director organises a review meeting at the end of the programme/module The Education unit carries out a global review of the assessments at the end of the calendar year | The results are sent to teaching staff in the form of a confidential report For medicine: all of the individual assessments are included in the annual report of the Education unit anonymously |
| Remedial support | In the event of an isolated problem, the Education unit offers personalised or group pedagogical support to all programme directors or teaching staff. In the event of a recurring problem, the School's Management Board will seek advice from the programme | For medicine: in the event of a negative assessment that exceeds a certain threshold, the Education unit will contact teaching staff and set up a meeting For medicine: in the event of repeated |

directors, teaching staff, students, the Education unit and any other person involved, then it will meet the person or persons responsible and decide on measures for improvement. The Deanship will be involved in the process if necessary.

negative assessment, the Education unit will consult the Management Board of the School, after having informed the person involved.

Further comments

With regard to programme assessments, the Management Board of the School also obtains information via other sources of information, such as the Advisory Committee of Students (Commission consultative des étudiants, CCE) of Biology and Medicine.

Furthermore, the Education unit asks students, in the module assessments for medicine, to award an overall mark to each lecturer's performance, which allows the unit to perform a global assessment, particularly of teaching staff who do not teach often.

Individual assessment is one of the obligations to which all teaching staff at the UNIL are subject. According to the Directive 1.16, all teaching staff of the SFS must ensure their teaching is assessed three times during a six-year term of office. Individual assessment is carried out on the initiative of the teaching staff. Within the SCS, teaching staff must refer to Directive XX of the Deanship, which sets out the obligation to carry out at least one assessment during a six-year term of office.

→ UNIL Directive 1.16: www.unil.ch/interne/page41076.html

→ Assessment of teaching at the School of Biology:

www.unil.ch/ecoledobiologie/page80144.html

→ Assessment of teaching at the School of Medicine: www.unil.ch/fbm/page2328.html

5.2 Activity report – "teaching" section

In the event of a promotion, stabilisation or renewal of the term of office, teaching staff must submit an activity report to the General Direction of the UNIL⁶, through the Deanship of the FBM. One of the sections of this report must be devoted to teaching in the form of a self-assessment, the purpose of which is to encourage teaching staff to reflect on their pedagogical skills and motivate them to develop their skills in this area. The results of the individual assessment form one of the elements of this "teaching" section of the activity report that will be used in order to carry out a global assessment of the teaching activities, citing the strengths, the skills that are to be developed, problems encountered and projects.

The Education unit and the Teaching Support unit offer workshops in order to prepare for the drafting of this teaching dossier.

→ www.unil.ch/webdav/site/cse/shared/Guide_preparation_auto-evaluation_enseignement.pdf

⁶ With the exception of Teaching and Research Fellows within the Section of Clinical Sciences of the FBM, who must send their activity report to the Management Board of the CHUV.

5.3 Valorization of teaching

The Deanship would like to be better informed and give more weight to teaching activities during the assessments of terms of office, appointments, promotions, and so on. In order to do so, it has two channels at its disposal:

- **The self-assessment** provided by the lecturer in his or her activity report (cf. Section 4.3).
- **The ADIFAC system** (Archiving and Distribution of FACulty Information), which surveys all undergraduate and postgraduate teaching activities and the tasks for coordination and management of teaching. These data are collected each year for each lecturer and then grouped according to their SFS department or SCS service. They form the object of individual reports and reports by department/service. The activities for managing teaching are valued in accordance with hourly rates proposed by the Schools and approved by the Deanship.

→ www.unil.ch/adifac

→ Information on the FBM's support for young academics: www.unil.ch/fbm/page11981.html

Furthermore, **FBM Awards** are awarded each year in recognition of excellence in the various fields, notably:

- Excellence in Teaching Award for Biology
- Excellence in Teaching Award for Medicine
- Excellence in Student Guidance Award.

→ Scientific distinctions: <http://www.unil.ch/fbm/page2792.html>

6 Students

The students of the Faculty of Biology and Medicine are very active and involved in faculty life. They organise themselves and communicate with one another through several bodies:

- the Association of Biology Students (LAB)
- the Association of Medical Students in Lausanne (AEML)
- the Association of PhD Students and Assistants at the FBM (ADAS).

6.1 Biology students

Biology students and 1st year Pharmacy students are united by the LAB, the Association of Biology students. In addition to an information and support service for students, the LAB organises conferences with UNIL professors or external guests as speakers, for the discussion of job opportunities and career options in biology.

It also organises leisure and sporting activities throughout the year, including balls, parties (known as "Workchoppes"), ski camps, and so on.

The LAB is made up of a Committee, delegates from various other organisations (Faculty, Federation of Student Associations, etc.) and the General Members' Assembly.

→ www.unil.ch/fbm/page4807_fr.html

Furthermore, biology students participate in the governance of studies by means of the **Advisory Committee of Students** of Biology (Commission Consultative des Etudiants en biologie). This faculty committee allows them to express their opinion on the teaching conditions and discuss problems encountered by the class years.

It is made up of:

- two student representatives from each Bachelor year (BSc1, BSc2 and BSc3)
- two representatives who are Master students
- two representatives who are 1st year Pharmacy students
- the Director of the SB
- the Pedagogical Assistant of the SB

The student representatives are elected during the LAB's general assembly. The Advisory Committee of Students meets 3 to 4 times a year; urgent issues from each year group are dealt with in the interim, if necessary.

→ www.unil.ch/fbm/page7036_fr.html

6.1 Medical students

The **Association of Medical students in Lausanne** (AEML) represents the interests of medical students within the Faculty and externally. Its duties include, in particular, defending the interests of students in the area of training and with regard to timetables, promoting the integration of new students and organising various events.

The AEML is made up of a Committee, an Assembly of Delegates (for each year group and from various organisations) and the General Members' Assembly.

→ www.aeml.ch

The School of Medicine also has its own **Advisory Committee of Students** (Commission Consultative des Etudiants en médecine), which meets approximately once a year.

It is made up of:

- A President, who chairs the debates
- a Vice-President
- The Secretary of the AEML, who drafts the minutes
- 19 delegates from each year, at the rate of 3 per year of study and 1 for finalists
- the President of the AEML
- The Director and Vice-Director of the School of Medicine
- the Vice-Dean in charge of teaching at the Faculty

→ www.unil.ch/fbm/page2335.html

6.3 MD/PhD students and assistants of the FBM

The Association of MD/PhD students and assistants of the Faculty of Biology and Medicine (ADAS) brings together all the members of the intermediary staff, known as the “subordinate” staff, and includes all assistant lecturers, first assistants and MD/PhD students of the FBM.

It is the preferential spokesperson vis-à-vis the Deanship for all questions regarding assistants and PhD students, and it tries to resolve problems linked to working and thesis conditions, in collaboration with the Deanship.

Furthermore, every year the ADAS organises a D. Day, during which young researchers of the FBM have the opportunity to showcase their work during a poster session and to listen to high-level conference speakers.

→ www.unil.ch/adas

7 Practical information

Governance and organisation

Deanship for the 2009-2012 term of office

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| Dean | Patrick Francioli | Patrick.Francioli@chuv.ch |
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| Vice-Dean in charge of the organisation of Fundamental sciences | Beatrice Desvergne | Beatrice.Desvergne@unil.ch |
| Vice-Dean in charge of Academic positions | François Pralong | Francois.Pralong@chuv.ch |
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School Directors

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| Director of the Doctoral School | Stephanie Clarke | Stephanie.Clarke@chuv.ch |
| Director of the School of Postgraduate Medical Studies | Jean-Daniel Tissot | Jean-Daniel.Tissot@mavietonsang.ch |
| Head of the Education unit | Raphaël Bonvin | Raphael.Bonvin@unil.ch |

Sections of the Faculty

Section of Fundamental Sciences

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| Vice-Director | Nicolas Perrin | Nicolas.Perrin@unil.ch |

Section of Clinical Sciences

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School of Biology

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| Management of IT infrastructures | Julien Gianotti | Julien.Gianotti@unil.ch |

Course Directors for the Bachelor in Biology

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| Biochemistry / Cell and molecular biology | Liliane Michalik | Liliane.Michalik@unil.ch |
| Biology of organisms Ecology - Evolution | Philippe Christe | Philippe.Christe@unil.ch |
| Biology and Society | Michel Chapuisat | Michel.Chapuisat@unil.ch |
| Plant biology | Philippe Reymond | Philippe.Reymond@unil.ch |
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| Physiology | Luc Pellerin | Luc.Pellerin@unil.ch |
| Basic sciences | Marc Robinson-Rechavi | Marc.Robinson-Rechavi@unil.ch |

Directors for the Masters in Biology

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| Master of Science in Molecular Life Sciences | Christian Fankhauser | Christian.Fankhauser@unil.ch |
| Master of Science in Medical Biology | Olivier Staub | Olivier.Staub@unil.ch |

Course Directors for the Master of Science in Medical Biology

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| Metabolism | Bernard Thorens | Bernard.Thorens@unil.ch |
| Neurosciences | Andrea Volterra | Andrea.Volterra@unil.ch |
| Pharmacology | Marie-Christine Broillet | Marie-Christine.Broillet@unil.ch |

Head of the 1st year of the Bachelor in Pharmacy

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School of Medicine

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Administrative team

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Year directors and programme directors for the medical curriculum

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| Director of BMed3 | Bruno Gravier | Bruno.Gravier@chuv.ch |
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Module Directors for the medical curriculum

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| B1.2 Cell | Gian-Paolo Dotto | Gian-Paolo.Dotto@unil.ch |
| B1.3 Development | Jean-Pierre Hornung | Jean-Pierre.Hornung@unil.ch |
| B1.4 Locomotor system | Beat Riederer | Beat.Riederer@chuv.ch |
| B1.5 Medicine : Individual, Community, Society (MICS) | Francesco Panese and Friedrich Stiefel | Francesco.Panese@unil.ch Frederic.Stiefel@chuv.ch |
| B2.1 Cells, organs, systems | Gian-Paolo Dotto | Gian-Paolo.Dotto@unil.ch |
| B2.2 Blood, immunity, infection, cancer | Michel Duchosal | Michel.Duchosal@chuv.ch |
| B2.3 Neurosciences | Egbert Welker | Egbert.Welker@unil.ch |
| B2.4 Respiration, circulation | Luc Tappy | Luc.Tappy@unil.ch |
| B2.5 Digestion, metabolism | Romano Regazzi | Romano.Regazzi@unil.ch |
| B2.6 Urology, homeostasis | Laurent Schild | Laurent.Schild@unil.ch |
| B3.1 Heart, lungs | Bernard Waeber | Bernard.Waeber@chuv.ch |
| B3.2 Abdominal pain | Jean-Claude Givel | Jean-Claude.Givel@chuv.ch |
| B3.3 Inflammation | Pierre-Alexandre Bart | Pierre-Alexandre.Bart@chuv.ch |
| B3.4 Neurological processes, psychological processes | Pierre Bovet | Pierre.Bovet@chuv.ch |
| B3.5 Growth | Nicolas von der Weid | Nicolas.von-der-Weid@chuv.ch |

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| B3.6 Community immersion | Alain Pécoud | Alain.Pecoud@hospvd.ch |
| M1.1 Joint pain | Jean Dudler | Jean.Dudler@chuv.ch |
| M1.2 Mother – child | Patrick Hohlfeld | Patrick.Hohlfeld@chuv.ch |
| M1.3 ENT – Dermatology – Ophthalmology | Daniel Hohl | Daniel.Hohl@chuv.ch |
| M1.4 Introduction to the dissertation | Bernard Burnand | Bernard.Burnand@chuv.ch |
| M2.1 Generalism I | Jacques Cornuz | Jacques.Cornuz@hospvd.ch |
| M2.2 Endocrinology, psychiatry | François Pralong | Francois.Pralong@chuv.ch |
| M2.3 Oncology, haematology, infectious diseases | Oscar Marchetti | Oscar.Marchetti@chuv.ch |
| M2.4 General courses | Nicolas Gilliard Jean-Pierre Hornung | Jean-Pierre.Hornung@unil.ch Nicolas.Gilliard@chuv.ch |
| M2.4 Integrated courses | Nicolas Gilliard Jean-Pierre Hornung | Jean-Pierre.Hornung@unil.ch Nicolas.Gilliard@chuv.ch |
| M2.6 Generalism II | Jacques Cornuz | Jacques.Cornuz@hospvd.ch |
| B2.7, B3.7, M1.7 Medicine : Individual, Community, Society (MICS) | Jean-Bernard Daeppen | Jean-Bernard.Daeppen@chuv.ch |
| B2.8, B3.8, M1.8, M2.8 Clinical Skills | Olivier Lamy | Olivier.Lamy@chuv.ch |

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| Doctoral programmes | | |
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Doctorate in Medicine (MD)

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Doctorate in Neurosciences

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Doctorate in Nursing Sciences

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Heads of the doctoral programmes

Doctoral programme in Cancer and Immunology

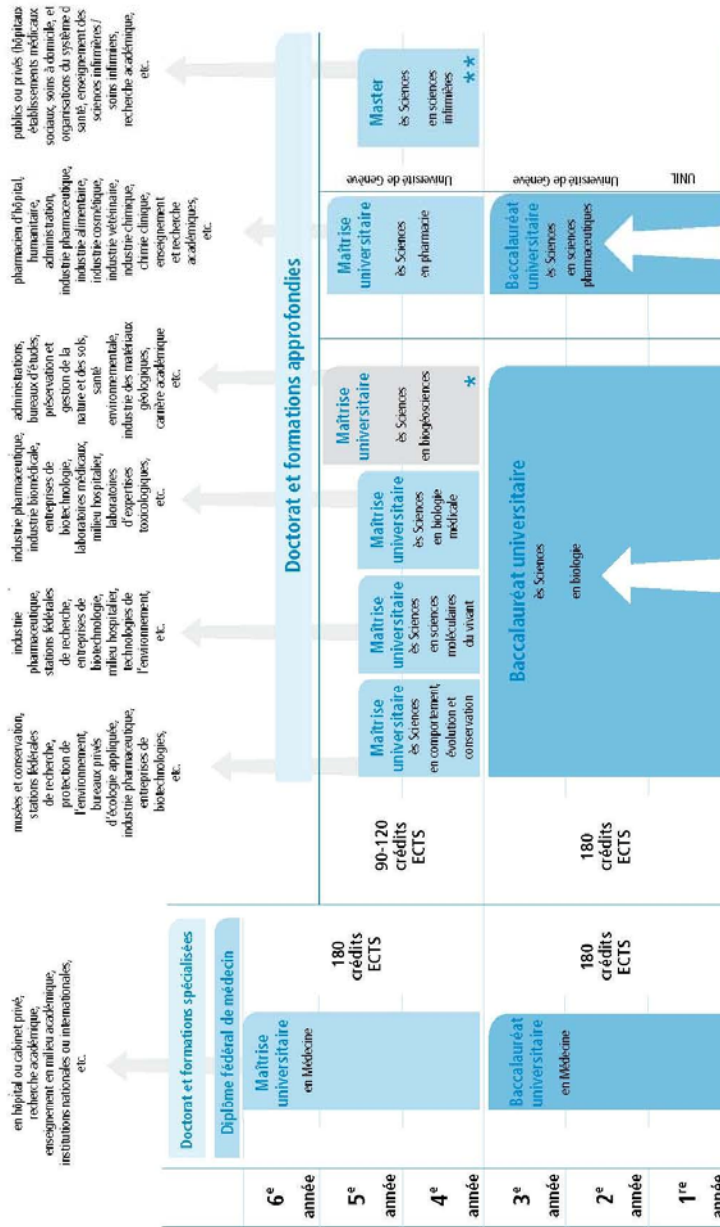
| | | |
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|--|----------------------------|--|
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Summary of the main degrees awarded at the FBM and by School

FACULTÉ DE BIOLOGIE ET DE MÉDECINE (L175)

STRUCTURE GÉNÉRALE DES ÉTUDES



En couleur : programmes offerts par la Faculté de biologie et de médecine.

* Maîtrise universitaire ès Sciences en biogéosciences : délivrée conjointement par l'UNIL (Faculté des géosciences et de l'environnement) et l'Université de Neuchâtel. Cette Maîtrise est ouverte aux titulaires d'un baccalauréat universitaire ès Sciences en biologie.

** Maîtrise ès Sciences en sciences infirmières : délivrée conjointement par l'UNIL et la Haute Ecole Spécialisée de Suisse Occidentale (HES-SO).

Pour une vue d'ensemble de l'offre en formation de l'UNIL, consultez www.unil.ch/enseignement.