

## Faculty of Medicine



SBIC2

Licence en sciences biomédicales (sciences biomédicales cliniques) (Diploma of the Second Cycle (Licence) in Biomedical Sciences (clinical biomedical sciences))



### Programme management

SBIM Ecole des sciences biomédicales

Academic Supervisors : Annie Robert et Dominique Maiter

Tel. 027643321

E-mail : annie.robert@epid.ucl.ac.be

Contact person : Elisabeth Coppe

Tel. 027645034

E-Mail coppe@smd.ucl.ac.be

### Specific study objectives for the programme in Biomedical Sciences, orientation: Clinical Biomedical Sciences

The aim of this orientation is to train professionals in the domain of clinical research which involves the patient and the illness more as a subject of observation and hypothesis. These studies essentially relate to pathology, pharmacology and notions of analysis of clinical groups.

This orientation addresses, in particular, student who have successfully completed their first university study cycle ("candidature") in Biomedical, Medical or Pharmaceutical Sciences.

*For all complementary information concerning the studies, please address the Vice-President of the programme management committee or the secretary's office of the school.*

### Admission conditions for the "licence" programmes in Biomedical Sciences

The "licence" programmes are accessible to the following students :

- holders of the "candidat" diploma in Biomedical Sciences, Medecine, Pharmaceutical Sciences, Dental Sciences, Agronomic Sciences and Sciences (Biological, Chemical and Veterinary), from a Belgian or a Luxembourg university;
- holders of a university diploma judged to be equivalent in domains other than those mentioned above subject to analysis of the application ;
- holders of a non-university higher diploma ("gradu ") in Chemistry, clinical chemistry, medical biology or dietetics subject to passing an admission exam and adding a possible complement of studies for 150 hours maximum ;
- those who have passed the first two years of the "candidature" in medecine, subject to the approval of the Committee of Biomedical Sciences and a complement of studies.

### Admission procedure

The admission procedures and inscription at the University are detailed in the "General Information" pamphlet of the study Programme.

### Programme content

SBIC21 First year of Studies

#### Molecular approach

BCHM1121 Biochimie humaine normale et pathologique[60h+16h] (8 credits) (in French) Louis Hue, Frédéric Lemaigre

FARM2182 Molecular genetics of the procaryotes and concepts of genetic engineering[30h+15h] (4 credits) (in French) Etienne De Plaen, Jean-No l Octave (coord.)

#### Functional approach

DENT1260 Physiologie humaine[45h+15h] (6 credits) (in French) Sonia Brichard, Nicole Morel

<u>FARM2290</u>	General pathophysiology[30h] (3 credits) (in French)	Olivier Feron, Michel Lambert (coord.)
<u>SBIM2110</u>	Elements of general pathology[15h] (1 credits) (in French)	Yves Humblet, Jean-Marie Maloteaux
<u>SBIM2120</u>	Elements of Neuroscience[30h] (4 credits) (in French)	Jean-Noël Octave
<b>Morphological approach</b>		
<u>ANPG1300</u>	General Pathology[10h+20h] (2 credits) (in French)	Etienne Marbaix, Jacques Rahier
<b>Xenobiotics approach</b>		
<u>FARM2144</u>	General Pharmacology[30h+15h] (3.5 credits) (in French)	Josiane Burton, Emmanuel Hermans, Roger-K. Verbeeck
<i>[partim pharmacokinetics : 15 hours]</i>		
<u>FARM2240</u>	Pharmacokinetic and clinical biology[30h+15h] (4 credits) (in French)	Roger-K. Verbeeck, Pierre Wallemacq (coord.)
<i>[partim: 30 hours of lectures]</i>		
<u>MCBL1330</u>	Medical Microbiology[50h+12.5h] (6 credits) (in French)	Michel Delmée, Patrick Goubau
<i>[partim 35 hours, bacteriology, mycology, parasitology]</i>		
<u>DENT2140</u>	Pharmacologie spéciale (2ème partie) et prescription médicale[52.5h] (in French)	Jean-Marie Maloteaux (coord.), Maurice Wibo, Francis Zech
<i>[partim special pharmacology : 30h]</i>		
<b>Quantitative approach</b>		
<u>ESP3142</u>	Epidemiology[22.5h+7.5h] (3 credits) (in French)	Fabienne Nackers, Annie Robert (coord.)
<u>INFM2111</u>	Eléments d'informatique médicale[15h+15h] (2 credits) (in French)	Benoît Debande
<b>"Public Health or Human Sciences approach "</b>		
<u>SBIM2130</u>	Ethique du développement du médicament[15h] (1 credits) (in French)	Paul Tulkens
<i>one of the 3 following courses subject to registering at the Biomedical Sciences secretary's office</i>		
<u>MD2201</u>	Christian ethics[15h] (2 credits) (in French)	Philippe Goffinet
<u>MD2202</u>	Faith and reason[15h] (2 credits) (in French)	N.
<u>MD2203</u>	Questions of Religious Sciences : The Bible and his Message[15h] (2 credits) (in French)	Jean-Marie Van Cangh
<i>Language Course</i>		
<u>ANGL2454</u>	Interactive English[30h] (3 credits)	Marc Piwnik, Albert Verhaegen
<b>Options</b>		
60 hours minimum for the year, to be chosen in agreement with the promoter and the programme management committee. Students with a non-university higher education diploma who have successfully completed their admission exam may, depending on their previous studies, have to add a supplement of maximum 150 hours to their programme in the first or second cycle at the school, with the approval of the programme manager.		
<b>Apprenticeship</b>		
<u>SBIM9212</u>	Stage en laboratoire[30h] (3 credits) (in French)	N.
<i>The information concerning this apprenticeship are available at the secretary's office.</i>		
<i>This apprenticeship takes place during the programme of the 2nd year of the first cycle of university studies ("candidature") in Biomedical Sciences, but can be validated at the end of the 1st year of the "licence" programme at the latest.</i>		
<b>Thesis</b>		
<i>C.f. SBIC 22</i>		

## SBIC22 Second year of studies

### Compulsory courses

<u>ANAT1170</u>	Anatomie radiologique et imagerie normale[30h+7.5h] (4 credits) (in French)	Guy Cosnard, Baudouin Maldague, Bernard Van Beers
<i>[partim]</i>		
<i>Students with a "candidat" diploma in medicine are dispensed from this course.</i>		
<u>ESP3143</u>	Méthodes d'analyse des études d'observation[15h] (in French)	Philippe Lambert, Annie Robert
<u>ESP3144</u>	Méthodes de revue systématique et de méta-analyse[15h] (in French)	Annie Robert
<u>INFM2112</u>	Medical Informatics[15h+15h] (2 credits) (in French)	Etienne De Clercq, Francis Roger France
<u>STAT2530</u>	Statistics in clinical trials.[22.5h+7.5h] (5 credits) (in French)	Philippe Lambert, Annie Robert

### Options

60 hours minimum for the year, to be chosen with the agreement of the promoter and the programme management committee.

**Thesis**

This thesis consists of a personal scientific piece of work in the domain of clinical research and written, at least in part, in a unit of the Faculty of Medicine or in one of the University clinic services at Saint-Luc, in Mont Godinne, or a hospital network (CRHU), under the scientific responsibility of a member of the permanent academic or scientific personnel of UCL. The writing of the thesis involves at least 90 hours of seminars, work meetings or supervised practical work, under the responsibility of the promoter.

In the case where, after the agreement of the management committee, the thesis is carried out in another faculty, in a non-university centre of research, or in industry, a member of the management committee will intervene in the supervision of the thesis in the capacity of co-promoter. The work on the thesis will begin as from the first year of the licence (SBIC 21). The domain in which it will be written will be communicated to the committee with the written agreement of the promoter by 30th November of the first year of the programme, at the latest.

**Recommended options for the SBIC orientation****Molecular approach**

<u>FARM3320</u>	Principe et méthodologie des dosages radioimmunologiques et radionucléidiques[15h+40h] (in French)	Diane Maisin, Marianne Philippe (coord.)
<u>MNUC2100</u>	Master and complementary master[15h] (2 credits) (in French)	François Jamar, Thierry Vander Borgh
<u>SBIM2520</u>	Workshop of molecular genetics[40h] (3 credits) (in French)	Patrick Jacquemin, Patrick Jacquemin
<b>Functional approach</b>		
<u>INTR2291</u>	Functional cardiac investigations[15h] (2 credits) (in French)	Claude Hanet (coord.), Agnès Pasquet, Erwin Schroeder
<u>INTR2292</u>	Pulmonary function testing[15h] (2 credits) (in French)	Giuseppe Liistro, Eric Marchand
<u>INTR2430</u>	Human nutrition[15h] (2 credits) (in French)	Jean-Paul Thissen
<u>MED2370</u>	Geriatric medicine[15h] (1 credits) (in French)	Pascale CORNETTE, Philippe Heures, Philippe Meire, Christian Swine (coord.)
<u>MEDI2300</u>	Diseases of the nervous system : Neurology, Neuropediatrics, Neurosurgery and Neuropharmacology[65h] (in French)	Geneviève Aubert, Jean-Marie Maloteaux, Marie-Cécile Nassogne, Christian Raftopoulos, Christian Sindic (coord.), Kenou Van Rijckevorsel

*[partim theory of nervous diseases, 30 hours]*

Parts of the course, depending on the topic of the thesis, from the **PhD sectors in medicine** ( cardio-vascular, respiratory, infectious diseases, digestive, locomotor, urology-nephrology, endocrinology and hematology-cancerology sectors) may be chosen as options. Students are invited to consult the 1st and 2nd year PhD programmes in Medicine.

**Morphological approach**

<u>ISTO1301</u>	Normal histology of systems (part 2)[15h+25h] (4 credits) (in French)	Idesbald Colin (supplée Jean-François Deneff), Jean-François Deneff, Marie-Christine Many (coord.), Jean-Marie Scheiff
-----------------	---	--

**Xenobiotics approach**

<u>FARM3334</u>	Processus de découverte et de développement du médicament[22.5h] (in French)	Paul Tulkens
<u>INTR2410</u>	Physiological and pharmacological control of energy homeostasis[15h] (2 credits) (in French)	Sonia Brichard
<u>MED2332</u>	Strategy for the optimal use of the laboratory and of therapies in infectious diseases[15h] (2 credits) (in French)	Michel Delmée, Gerald Glupczynski, Patrick Goubau, Francis Zech

**Quantitative approach**

<u>STAT2520</u>	Design of experiment.[22.5h+7.5h] (5 credits) (in French)	Bernadette Govaerts, Eric Le Boulengé
-----------------	---	---------------------------------------

**Human Sciences approach**

<u>ESP3520</u>	Evaluation of quality and organisation of care[30h] (in French)	Francis Roger France
<u>ESP3530</u>	Strategy of the medical decision[30h] (in French)	Olivier Devuyst, Annie Robert
<u>HOSP3180</u>	Aspects économiques et financiers des soins de santé[22.5h] (in French)	Jean Hermesse
<u>HOSP3110</u>	Droit médico-social et hospitalier[30h] (in French)	François Ladrière
<u>MED2331</u>	Medical imaging and clinical biology : Strategy of utilisation[16.5h] (2 credits) (in French)	Olivier Devuyst, Michel Lievens, Bernard Van Beers
<u>MED2150</u>	Elements of forensic medicine[15h] (1 credits) (in French)	Frédéric Bonbled
<u>MEX2160</u>	L'expertise médicale, y compris la déontologie de l'expertise et les modes de réparation des dommages à la personne[30h] (in French)	Frédéric Bonbled
<u>PSYC2170</u>	Biological psychiatry[30h] (2 credits) (in French)	Jean-Marie Maloteaux, Arlette Seghers

<u>DROI2395</u>	Medical Law[30h] (4.5 credits) (in French)	Geneviève Schamps
<b>Methodology courses</b>		
<u>SBIM3100</u>	Elementary quantitative analysis[22.5h] (in French)	Bernard Tilquin
<u>SBIM2111</u>	Methodolgy of cell and molecular biology[22.5h] (3 credits) (in French)	Pierre Courtoy (coord.), Emile Van Schaftingen
<u>BCMM3320</u>	Pathological Histo- and Cytochemistry[30h] (in French)	Jean-François Denef, Yves Guiot (coord.), Jacques Rahier

*[partim 22,5 hours]*

### **Positioning of the degree within the University cursus**

Besides the programmes of the 3rd cycle and the PhD, organised by the School of Biomedical Sciences, the graduate students in Biomedical Sciences also have access to the programmes organised in other schools or institutes, including the following :

- specialised study diploma in Environment Sciences and Management (ENVI3DS)
- specialised study diploma in Health Sciences, Public Health orientation (clinical research option) (ESP3DS/EP)
- specialised study diploma in Statistics ( Epidemiology and Biostatistics orientation) (STAT3DA)