Master en sciences biomédicales (60 crédits)

During the first quadrimester, the students will foster their knowledge on the molecular aspects of pharmacology, clinical biology and pathology, genetics and oncology, developmental genetics, bioinformatics, and neurosciences.

During the second quadrimester they will achieve a Master thesis and attend:

- A unique interdisciplinary and interfaculty program in Translational medicine covering preclinical, clinical, regulatory, patenting, business, management and patient-focused topics.
- A module on pre-clinical and clinical research providing insights in state-of-the-art in vitro and in vivo research tools and methods to perform translational research and in the choice of adequate research models and proper experimental design. The module will also cover current and innovative technologies for drug discovery, in vitro and in vivo pre-clinical safety assessment of newly discovered drugs, and their validation through clinical trials. Intellectual property, clinical study design, quality control, as well as legal and ethical requirements in clinical investigation will also be discussed.
- A module on translational research in selected disease areas that will illustrate the bed-to-bench and back again (3B) principle of translational medicine through the approach of case-studies in relevant diseases.

Année unique | MA60-BIME

Cours obligatoires

- **BIME-G5505**  
  Interfaculty and interdisciplinary program in Healthcare Innovation | Hilde STEVENS (Coordonnateur)  
  5 crédits [cours magistral: 40h, exercices dirigés: 20h]  
  deuxième quadrimestre  
  Anglais

- **BIME-G5506**  
  Translational medicine in selected diseases areas | Mariana IGOILLO ESTEVE (Coordonnateur)  
  5 crédits [cours magistral: 45h, exercices dirigés: 15h]  
  deuxième quadrimestre  
  Anglais

- **BIME-G5512**  
  Basics of pre-clinical and clinical research | William HAUSDORFF (Coordonnateur) et Hilde STEVENS  
  5 crédits [séminaires: 60h]  
  deuxième quadrimestre  
  Anglais

- **BMOL-G4410**  
  Tools for the development of pharmaceuticals and other therapeutic modalities | Caroline VERHOEVEN (Coordonnateur), Ahmad AWADA et Joëlle NORTIER  
  5 crédits [cours magistral: 36h, travaux pratiques: 12h]  
  premier quadrimestre  
  Anglais

- **BMOL-G4416**  
  quadrimestre inconnu

- **BMOL-G4417**  
  Genic expression and Oncology | Pierre HEIMANN (Coordonnateur), François FUKS, Cyril GUEYDAN et Carine VAN LINT  
  5 crédits [cours magistral: 50h, exercices dirigés: 50h]  
  premier quadrimestre  
  Anglais

- **CHIM-G4311**  
  Clinical biology and pathology | Marie TRE-HARDY (Coordonnateur)  
  5 crédits [cours magistral: 36h]  
  premier quadrimestre  
  Anglais

- **INFO-G4410**  
  Bioinformatics | Vincent DETOURS (Coordonnateur)  
  5 crédits [cours magistral: 24h, travaux pratiques: 24h]  
  premier quadrimestre  
  Anglais

- **MEDI-G4411**  
  Neurosciences (part I) | Serge GOLDMAN (Coordonnateur), Alban DE KERCHOVE D’EXAERDE, David GALL et Jean-Marie VANDERWINDEN  
  5 crédits [cours magistral: 59h]  
  premier quadrimestre  
  Anglais

- **MEMO-G5507**  
  Master thesis | Mariana IGOILLO ESTEVE (Coordonnateur)  
  15 crédits [mfe/tfe: 200h]  
  1er et 2e quadrimestre  
  Anglais