Teaching units (TU) of the first part of the cursus aim to acquire basic scientific knowledge with a pharmaceutical specificity in mind. The TU « General Biology » deals with aspects relative to cytology, histology, parasitology. The TU « Plant Biology » is concerned with the evolution of plant kingdom, and the classification of plants with medicinal properties. The TU « Fundamentals of Anatomy » gives the future pharmacists basic knowledge on the structure and topology of human body and includes elements of embryology. The TU « General Chemistry » deals with substances at a molecular level which is a requirement to better explain the progress of a chemical reaction. The TU « Organic Chelistry » explains the mechanisms of the reactions involved in the synthesis of active ingredients of drugs. To improve the rate of success of first-year student, learning seminars are organized (test guidance, language skills, literature search, computer science). The TU « Pharmacy and Society » deals with themes such as the history of pharmacy, the journey of drugs, the access of patients to care and medications, economical problems of health care and a few major ethical and social problems in relation to medical drugs.

The aim of the TU of the second and third parts of the program is to provide the students the fundamentals of biochemistry, biology and physiology. These elements are required to the comprehension of pathological processes in man (infection, metabolic disorders, tumors,…) studied in the last part of the program. Other TU introduce the students to the methods and techniques routinely used to analyze drugs. Some TU are devoted to the study and the quality control of drugs and of their components. These TU give the students the theoretical and practical basis required for their future study of the mode of action and of the analysis of therapeutic agents. At the end of the program, transdisciplinary practicals are organized in order to help the students to integrate their recent biological and chemical assets through problem-based learning.

### Bloc 1 | BA-PHAR

#### Cours obligatoires

**BIOL-J101 Biologie animale** | Hassan JIJAKLI (Coordinator)
- 5 credits [lecture: 50h, tutorial classes: 3h, practical work: 11h]  
- second term  
- French

**BIOL-J102 Biologie végétale** | Nausicaa NORET (Coordinator)
- 5 credits [lecture: 36h, practical work: 12h, field trips: 12h]  
- first term  
- French

**CHIM-J101 Chimie générale** | Véronique CABIAUX (Coordinator)
- 10 credits [lecture: 60h, tutorial classes: 48h]  
- first and second terms  
- French

**CHIM-J102 Chimie organique** | Franck MEYER (Coordinator)
- 5 credits [lecture: 36h, tutorial classes: 24h]  
- second term  
- French

**CHIM-J103 Chimie expérimentale** | Franck MEYER (Coordinator) and Véronique CABIAUX
- 5 credits [practical work: 48h]  
- first and second terms  
- French

**MATH-F113 Mathématiques** | Jennifer ALONSO GARCIA (Coordinator) and Clément Cerovecki
- 5 credits [lecture: 24h, tutorial classes: 24h]  
- first term

**MEDI-J100 Eléments d'anatomie et d'embryologie humaine** | Véronique FEIPEL (Coordinator), Hassan JIJAKLI and Olivier Snoeck
- 5 credits [lecture: 32h, tutorial classes: 6h, practical work: 4h, field trips: 4h]  
- first term  
- French

**PHYS-F104 Physique 1** | Barbara CLERBAUX (Coordinator), Stéphane DETOURNAY and Michele SFERRAZZA
- 10 credits [lecture: 72h, tutorial classes: 36h, field trips: 4h]  
- academic year  
- French

**TRAN-J103 Pharmacie et société, projets transdisciplinaires** | Franck MEYER (Coordinator), François DUFRAISNE, Kris De Braekeleer, Cédric Delporte, Véronique FONTAINE, Kelsey HULL, Hassan JIJAKLI, Caroline STEVIGNY and Pierre VAN ANTWERPEN
- 5 credits [lecture: 20h, language practice: 24h, personal assignments: 24h]  
- second term  
- French

**TRAN-J111 Accueil et initiation à la méthodologie universitaire** | Nathalie WAUTHOZ (Coordinator)
- 5 credits [tutorial classes: 38h, workshop: 8h]  
- first term  
- French
## Cours obligatoires

<table>
<thead>
<tr>
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<th>Crédits</th>
<th>Temps en heures</th>
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<tbody>
<tr>
<td>BIOL-J201</td>
<td>Introduction à l’étude des plantes médicinales</td>
<td>Caroline STEVIGNY</td>
<td>5</td>
<td>18h, 30h, 12h</td>
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<tr>
<td>BMOL-J201</td>
<td>Biologie moléculaire</td>
<td>David VERMIJLEN</td>
<td>5</td>
<td>42h</td>
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<td>CHIM-F202</td>
<td>Biochimie métabolique et structurale</td>
<td>Véronique KRUYS et Vincent RAUSSENS</td>
<td>5</td>
<td>60h</td>
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<tr>
<td>CHIM-J201</td>
<td>Chimie organique pharmaceutique</td>
<td>François DUFRASNE</td>
<td>5</td>
<td>30h, 12h</td>
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<tr>
<td>CHIM-J202</td>
<td>Spectroscopies moléculaires et spectrométrie de masse</td>
<td>Pierre VAN ANTWERPEN, Cédric Delporte et Michel LÜHMER</td>
<td>5</td>
<td>12h, 6h, 24h</td>
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<tr>
<td>MEDI-J201</td>
<td>Physiologie humaine</td>
<td>Stéphanie POCHET</td>
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<td>60h</td>
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<td>PHAR-J210</td>
<td>Analyse Pharmaceutique, méthodes volumétriques</td>
<td>Cédric Delporte, Jacques DUBOIS et Kris De Braekeleer</td>
<td>5</td>
<td>30h, 10h, 40h</td>
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<tr>
<td>PHAR-J230</td>
<td>Analyse Pharmaceutique, méthodes Physicochimiques</td>
<td>Jacques DUBOIS et Nathalie WAUTHOZ</td>
<td>5</td>
<td>30h, 6h, 32h</td>
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<td>STAT-J201</td>
<td>Statistiques appliquées aux sciences pharmaceutiques</td>
<td>Kris De Braekeleer</td>
<td>5</td>
<td>24h, 28h</td>
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<tr>
<td>TRAN-J201</td>
<td>Scientific English</td>
<td>Stéphanie POCHET, Kelsey HULL et David VERMIJLEN</td>
<td>5</td>
<td>12h, 24h, 24h</td>
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<tr>
<td>TRAN-J211</td>
<td>Approche pratique des sciences du vivant</td>
<td>David VERMIJLEN, Cédric Delporte et Stéphanie POCHET</td>
<td>10</td>
<td>100h, 15h</td>
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**NB:** 
- **5 credits**
- **10 credits**
- **12 credits**

**Études en langue :**
- **French**
- **English/French**
Cours obligatoires

**BIOL-J301**  
**Microbiologie générale, Hygiène, Immunologie** | Véronique Fontaine (Coordinator) and David Vermijlen  
5 credits [lecture: 50h]  
First term  
French

**BIOL-J302**  
**Microbiologie médicale** | Véronique Fontaine (Coordinator)  
5 credits [lecture: 22h, practical work: 42h]  
First term  
French

**MEDI-J301**  
**Physiopathologie, éléments de pathologie humaine et épidémiologie** | Véronique Mathieu (Coordinator) and Kris De Braekeleer  
5 credits [lecture: 44h, tutorial classes: 4h]  
First term  
French

**PHAR-J301**  
**Pharmacologie générale et éléments de pharmacocinétique** | Stéphanie Pochet (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 24h, personal assignments: 12h]  
First term  
French

**PHAR-J302**  
**Analyse pharmaceutique : méthodes instrumentales et contrôle de qualité** | Cédric Delporte (Coordinator) and Kris De Braekeleer  
5 credits [lecture: 36h, practical work: 24h]  
Second term  
French

**PHAR-J303**  
**Etude des médicaments : Pharmacognosie et médicaments d’origine naturelle** | Caroline Stevigny (Coordinator)  
5 credits [lecture: 36h, practical work: 24h]  
Second term  
French

**PHAR-J304**  
**Etude des médicaments : médicaments inorganiques et radiopharmacie** | Jacques Dubois (Coordinator), Kris De Braekeleer, Pierre Van Antwerpen and Zéna Wimana  
5 credits [lecture: 30h, practical work: 24h]  
Second term  
French

**PHAR-J305**  
**Etude des médicaments : médicaments organiques 1 et biologiques** | François Dufrasne (Coordinator) and Cédric Delporte  
5 credits [lecture: 60h]  
Second term  
French

**TRAN-J311**  
**Projet transdisciplinaire en analyse des médicaments** | François Dufrasne (Coordinator), Kris De Braekeleer, Cédric Delporte and Caroline Stevigny  
10 credits [tutorial classes: 28h, practical work: 62h, personal assignments: 18h]  
Academic year  
French

**TRAN-J312**  
**Pratique officinale** | Florence Souard (Coordinator), François Dufrasne, Cédric Delporte, Caroline Stevigny and Pierre Van Antwerpen  
10 credits [tutorial classes: 24h, practical work: 80h, personal assignments: 12h]  
First and second terms  
French