

# Bachelor in Chemistry

During the BA, students do basic training courses in mathematics, physics and chemistry, and tackle more specific aspects of chemistry, complemented by elements of closely related disciplines. To acquire both general and specific competences, the student learns to develop a coherent scientific approach and an operational knowledge of basic tools in sciences, notably in chemistry. The ex cathedra courses are complemented by exercises carried out in supervised small groups, personal work and laboratories. The student is introduced to the proper execution of personal work, which will allow him to optimize his/her creativity and sense of initiative.

The sub-disciplines of chemistry are tackled along the following main themes:

- > organic chemistry
- > analytical chemistry
- > biochemistry
- > theoretical chemistry
- > inorganic chemistry
- > quantum mechanics
- > thermodynamics
- > chemical physics

## Bloc 1 | BA-CHIM

### Cours obligatoires

BIOL-F102	<b>Biologie générale</b>   Patrick MARDULYN (Coordinator) and Etienne MEYLAN ⌚ 5 credits [lecture: 48h] 📅 second term 🗨️ French
CHIM-F101	<b>Chimie générale</b>   Laurence RONGY (Coordinator), François RENIERS and Thierry VISART DE BOCARME ⌚ 20 credits [lecture: 96h, tutorial classes: 60h, practical work: 84h, project: 75h] 📅 first and second terms 🗨️ French
CHIM-F102	<b>Chimie organique 1</b>   Cécile MOUCHERON (Coordinator) ⌚ 5 credits [lecture: 30h, tutorial classes: 18h, project: 20h] 📅 second term 🗨️ French
MATH-F112	<b>Mathématiques 1</b>   Dimitri LEEMANS (Coordinator), Michele D'ADDERIO and Bruno PREMOSELLI ⌚ 10 credits [lecture: 60h, tutorial classes: 60h] 📅 first and second terms 🗨️ French
MATH-F115	<b>Compléments d'analyse et algèbre linéaire</b>   Joel FINE (Coordinator), Michele D'ADDERIO and Laurent LA FUENTE-GRAVY ⌚ 5 credits [lecture: 30h, tutorial classes: 24h] 📅 second term 🗨️ French
PHYS-F110	<b>Physique générale I et II</b>   Pascal VANLAER (Coordinator), Michele SFERRAZZA and Sophie VAN ECK ⌚ 15 credits [lecture: 72h, tutorial classes: 72h, practical work: 36h] 📅 first and second terms 🗨️ French

# Bachelor in Chemistry

## Bloc 2 | BA-CHIM

### Cours obligatoires

- CHIM-F201 **Chimie analytique 1** | Thomas DONEUX (Coordinator)  
 10 credits [lecture: 30h, practical work: 90h, project: 30h] first and second terms French
- CHIM-F204 **Chimie organique 2** | Ivan JABIN (Coordinator)  
 10 credits [lecture: 30h, practical work: 90h, project: 80h] first term French
- CHIM-F205 **Thermodynamique chimique** | Geneviève DUPONT (Coordinator) and Yannick DE DECKER  
 5 credits [lecture: 24h, tutorial classes: 24h, practical work: 12h] second term French
- CHIM-F206 **Mécaniques classique et quantique** | Nathalie VAECK (Coordinator) and Lieven CLARISSE  
 10 credits [lecture: 72h, tutorial classes: 48h] first and second terms French
- CHIM-F207 **Cristallographie et chimie inorganique** | François RENIERS (Coordinator), Karen FONTIJN and Jon USTARROZ TROYANO  
 5 credits [lecture: 44h, practical work: 16h] second term French
- CHIM-F208 **Biochimie 1** | Cyril GUEYDAN (Coordinator) and Véronique KRUYSS  
 5 credits [lecture: 60h] first and second terms French
- LANG-F201 **Anglais scientifique I** | Alexander CORNFORD (Coordinator), David Albert BEST and Hugh MURPHY  
 5 credits [tutorial classes: 48h] second term English
- MATH-F214 **Compléments de mathématiques** | Ignace LORIS (Coordinator)  
 5 credits [lecture: 36h, tutorial classes: 24h] first term French

### Cours optionnels

*A total of five credits chosen from the following*

- BIOL-F204 (optional) **Microbiologie moléculaire et cellulaire** | Laurence VAN MELDEREN (Coordinator) and Anne OP DE BEECK  
 5 credits [lecture: 36h] second term French
- ENVI-F1001 (optional) **Sciences de la Terre, Environnement et Société** | Pierre REGNIER (Coordinator), Jean-Michel DECROLY and Frank PATTYN  
 5 credits [lecture: 48h] first and second terms French
- ETHI-F201 (optional) **Sciences, éthique, histoire et société** | Grégoire Wallenborn (Coordinator) and Eric MURAILLE  
 5 credits [lecture: 48h] second term French
- ETHI-F301 (optional) **Science et Société : analyse de controverses scientifiques** | Patrick MARDULYN (Coordinator) and Grégoire Wallenborn  
 5 credits [lecture: 24h, project: 70h] first term French
- INFO-F206 (optional) **Informatique** | Olivier MARKOWITZ (Coordinator)  
 5 credits [lecture: 24h, tutorial classes: 12h, project: 24h] first term French
- PHYS-F105 (optional) **La structure de l'univers** | Alain JORISSEN (Coordinator) and Rodrigo ALVAREZ  
 5 credits [lecture: 48h] first term French
- PHYS-F517 (optional) **How To Make (almost) Any Experiment Using Digital Fabrication** | Denis TERWAGNE (Coordinator)  
 5 credits [lecture: 24h, practical work: 24h] first term French

TRAN-F201  
(optional)

**Introduction aux enjeux de la durabilité** | Wouter ACHTEN (Coordinator) and Chiara ARMENI





















🕒 5 credits [lecture: 24h] 📅 second term 🗨️ French



# Bachelor in Chemistry

## Bloc 3 | BA-CHIM

### Cours obligatoires

- CHIM-F301 **Chimie organique 3** | Cécile MOUCHERON (Coordinator) and Cédric Theunissen  
 10 credits [lecture: 24h, practical work: 96h, project: 40h]  first term  French
- CHIM-F302 **Chimie analytique** | Jon USTARROZ TROYANO (Coordinator) and Thomas DONEUX  
 10 credits [lecture: 24h, practical work: 96h, project: 60h]  first term  French
- CHIM-F304 **Structures et symétries moléculaires** | Emilie CAUET (Coordinator), Antoine Aerts and Sophie Bauduin  
 5 credits [lecture: 36h, tutorial classes: 24h]  first term  French
- CHIM-F318 **Analyse structurale spectrométrique** | Michel LUHMER (Coordinator) and Pierre VAN ANTWERPEN  
 5 credits [lecture: 24h, tutorial classes: 24h]  second term  French
- CHIM-F320 **Cinétique chimique** | Thierry VISART DE BOCARME (Coordinator)  
 5 credits [lecture: 36h, tutorial classes: 12h, practical work: 12h, project: 12h]  second term  French
- CHIM-F321 **Thermodynamique statistique** | Yannick DE DECKER (Coordinator)  
 5 credits [lecture: 36h, tutorial classes: 24h]  second term  French
- CHIM-F325 **Spectroscopies moléculaires** | Jean VANDER AUWERA (Coordinator) and Pierre-François COHEUR  
 5 credits [lecture: 36h, tutorial classes: 12h, practical work: 12h, project: 15h]  second term  French
- CHIM-F327 **Scientific Literature and Communication** | Yannick DE DECKER (Coordinator), Alexander CORNFORD, Jean-Christophe LELOUP and Hugh MURPHY  
 5 credits [tutorial classes: 12h, project: 80h]  first and second terms  English/French
- CHIM-F328 **Travail de fin de cycle : Printemps des Sciences** | Yannick DE DECKER (Coordinator) and Jean-Christophe LELOUP  
 5 credits [project: 150h]  second term  French
- CHIM-F329 **Biochimie 2** | Vincent RAUSSENS (Coordinator), Cédric GOVAERTS and Véronique KRUYIS  
 5 credits [lecture: 36h, practical work: 24h]  first term  French