In order to access the Bachelor in Engineering (Civil Engineering or Architecture), students must have a certificate showing they have passed the special admission exam for this programme. The 2022–2023 programme is subject to change. It is provided for information purposes only.

**Programme objectives**

Fulfill your ambitions by gaining a grounding in the different aspects of engineering: creating, designing, producing, optimising, securing. You will develop skills ranging from scientific rigour to practical work. You will learn both know-how and interpersonal skills.

**Programme’s added value**

A « multitechnical » approach that enables you to gain an insight into all the theoretical and applied aspects of this field. A very comprehensive course with a particular focus on individual study and with lectures only making up one element of the course.

It is basically the most general BA course in the French-speaking Region of Belgium

For most courses you will have at your disposal:

- a specialist laboratory,
- the different faculty libraries as well as the university central libraries, especially the scientific and technical library,
- computer rooms.

**Teaching methods**

As from the first block, teaching methodologies range from classical courses to projects, including exercise and laboratory sessions.

**Succeed in your studies**

ULB offers a number of activities and resources that can help you develop a successful strategy before or during your studies. You can make the transition to higher education easier by attending preparatory courses, summer classes, and information and orientation sessions, even before you start your studies at ULB.

During your studies, many people at ULB are there specifically to help you succeed: support staff in each faculty, (inter-)faculty guidance counsellors, tutors, and experts in academic methodology.

**International/Openness**

The Erasmus exchange programme usually takes place during the master’s course. However, there are bilateral agreements (double degree agreements) enabling you to study abroad from the 3rd block of the bachelor’s course to the end of the 1st block of the master’s course.
Some of the subsequent masters in engineering are organised jointly with VUB in English.

**Job opportunities**

If you go on to do a Master in Civil Engineering, you will be able to work in the following areas:

- Corporate engineer
- Consultant engineer
- Research engineer
- Production engineer
- Engineer in a technical consultancy department.

You could also do research in applied sciences: constructions, chemistry, science of materials, physics, electricity, mechanics, information technologies, biomedical sciences.

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**Contacts**

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- +32 2 650 40 93
- https://polytech.ulb.be/fr/les-etudes/bacheliers

**Jury President**
Philippe BOGAERTS

**Jury Secretary**
Michel KINNAERT
## Bloc 1 | BA-IRCIB | BA-IRCI

### Cours obligatoires

**CHIM-H1001**  
**Chimie générale et ingénierie des procédés** | Philippe BOGAERTS (Coordinator) and Benoît HAUT  
10 credits [lecture: 60h, tutorial classes: 36h, practical work: 24h]  
 opted for: first and second terms  
 opted for: French

**INFO-H100**  
**Informatique** | Thierry MASSART (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 12h]  
 opted for: first term  
 opted for: French

**LANG-H1001**  
**Anglais** | Matthew LANGSLEY (Coordinator)  
2 credits [tutorial classes: 24h]  
 opted for: second term  
 opted for: English

**MATH-H1001**  
**Eléments d’algèbre et d’analyse** | Jérémy DOHET-ERALY (Coordinator) and Yves DE SMET  
5 credits [lecture: 30h, tutorial classes: 30h]  
 opted for: first term  
 opted for: French

**MATH-H1002**  
**Analyse I** | Yves DE SMET (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 36h]  
 opted for: second term  
 opted for: French

**MATH-H1003**  
**Algèbre linéaire et géométrie** | Jérémy DOHET-ERALY (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 36h]  
 opted for: second term  
 opted for: French

**MECA-H100**  
**Mécanique rationnelle I** | Alain DELCHAMBRE (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 36h]  
 opted for: first and second terms  
 opted for: French

**PHYS-H1001**  
**Physique générale I** | Marc HAELETERMAN (Coordinator)  
5 credits [lecture: 28h, tutorial classes: 12h, practical work: 12h]  
 opted for: first term  
 opted for: French

**PHYS-H1002**  
**Physique générale II** | Marc HAELETERMAN (Coordinator)  
5 credits [lecture: 32h, tutorial classes: 12h, practical work: 12h]  
 opted for: second term  
 opted for: French

**TRAN-H100**  
**Introduction aux sciences appliquées** | Dimitri GILIS (Coordinator)  
8 credits [lecture: 36h, tutorial classes: 60h]  
 opted for: first term  
 opted for: French

**TRAN-H101**  
**Projet multidisciplinaire I** | Marc HAELETERMAN (Coordinator)  
5 credits [practical work: 12h, project: 48h]  
 opted for: academic year  
 opted for: French
# Bloc 2 | BA-IRCIB | BA-IRCI

## Cours obligatoires

<table>
<thead>
<tr>
<th>Code</th>
<th>Titre</th>
<th>Professeur</th>
<th>Crédits</th>
<th>Délai</th>
<th>Durée</th>
<th>Langue</th>
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<tbody>
<tr>
<td>CHIM-H2001</td>
<td>Chimie physique, matériaux et fabrication, y compris les visites d’usine</td>
<td>Stephane GODET (Coordinator), Frédéric DEBASTE and Patrick HENDRICK</td>
<td>10 credits [lecture: 60h, tutorial classes: 12h, practical work: 48h]</td>
<td>academic year</td>
<td>French</td>
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<tr>
<td>CNST-H2001</td>
<td>Mécanique des solides et résistance des matériaux</td>
<td>Philippe BOUILLARD (Coordinator)</td>
<td>5 credits [lecture: 30h, tutorial classes: 30h]</td>
<td>second term</td>
<td>French</td>
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<tr>
<td>ELEC-H2001</td>
<td>Electricité</td>
<td>Frédéric ROBERT (Coordinator)</td>
<td>5 credits [lecture: 18h, tutorial classes: 18h, practical work: 24h]</td>
<td>first term</td>
<td>French</td>
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<tr>
<td>INFO-H2001</td>
<td>Programmation orientée objet</td>
<td>Hugues BERSINI (Coordinator)</td>
<td>3 credits [lecture: 30h, tutorial classes: 30h]</td>
<td>second term</td>
<td>French</td>
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<td>LANG-H2002</td>
<td>Anglais II</td>
<td>Matthew LANGSLEY (Coordinator) and Jenny Kappel</td>
<td>3 credits [lecture: 24h, tutorial classes: 12h]</td>
<td>first term</td>
<td>English</td>
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<td>MATH-H2000</td>
<td>Analyse II</td>
<td>Jérémie ROLAND (Coordinator) and Thomas LESSINNES</td>
<td>8 credits [lecture: 48h, tutorial classes: 48h]</td>
<td>first and second terms</td>
<td>French</td>
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<tr>
<td>MATH-H2002</td>
<td>Calcul des probabilités et statistiques</td>
<td>Yves DE SMET (Coordinator)</td>
<td>5 credits [lecture: 30h, tutorial classes: 30h]</td>
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<td>MATH-H202</td>
<td>Analyse numérique</td>
<td>Artem NAPOV (Coordinator)</td>
<td>4 credits [lecture: 24h, tutorial classes: 24h]</td>
<td>second term</td>
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<td>MECA-H200</td>
<td>Mécanique rationnelle II</td>
<td>Pierre LAMBERT (Coordinator)</td>
<td>5 credits [lecture: 24h, tutorial classes: 24h, practical work: 12h]</td>
<td>first term</td>
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<td>PHYS-H200</td>
<td>Physique quantique et statistique</td>
<td>Jean-Marc SPARENBERG (Coordinator)</td>
<td>5 credits [lecture: 46h, tutorial classes: 24h]</td>
<td>second term</td>
<td>French</td>
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<td>TRAN-H201</td>
<td>Projet multidisciplinaire II et gestion de projet</td>
<td>Philippe BOUILLARD (Coordinator) and Patrick SIMON</td>
<td>5 credits [practical work: 12h, project: 120h]</td>
<td>academic year</td>
<td>French</td>
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</table>
 Bloc 3 | BA-IRCIB | BA-IRCI

Cours obligatoires

**ELEC-H3001**  
Electricité appliquée  | Pierre HENNEAUX (Coordinator)  
5 credits [lecture: 30h, tutorial classes: 6h, practical work: 24h]  | first term  | French

**MATH-H3001**  
Signaux et systèmes  | Michel KINNAERT (Coordinator)  
5 credits [lecture: 30h, tutorial classes: 30h]  | first term  | French

**MECA-H3001**  
Fluid mechanics and transfer processes  | Alessandro PARENTE (Coordinator) and Frédéric DEBASTE  
5 credits [lecture: 30h, tutorial classes: 24h]  | first term  | English

**MECA-H301**  
Systèmes énergétiques : principes de bases et technologies durables  | Axel Coussement (Coordinator) and Alessandro PARENTE  
5 credits [lecture: 30h, tutorial classes: 14h, practical work: 16h]  | academic year  | French

**TRAN-H3001**  
Epistémologie des sciences et éthique de l’ingénieur  | Céline KERMISCH (Coordinator)  
5 credits [lecture: 30h, seminars: 12h, personal assignments: 12h]  | second term  | French

An alternative chosen from the seven following

Module Construction

**CNST-H302**  
Soil mechanics  | Bertrand FRANCOIS (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 24h, practical work: 12h]  | first term  | English

**CNST-H303**  
Analyse des structures  | Didier Snoeck (Coordinator)  
6 credits [lecture: 30h, tutorial classes: 36h]  | first term  | French

**CNST-H311**  
Comportement du béton et des matériaux cimentaires et histoire de l’architecture  | Stéphanie STAQUET (Coordinator) and Rika DEVOS  
5 credits [lecture: 24h, tutorial classes: 12h, practical work: 24h]  | second term  | French

**CNST-H312**  
Geology and engineering geology  | Pierre GERARD (Coordinator)  
5 credits [lecture: 24h, practical work: 36h]  | second term  | English

**CNST-Y302**  
Civil engineering hydraulics  | Gerlinde LEFEVER (Coordinator)  
4 credits [lecture: 24h, tutorial classes: 24h]  | second term  | English

**ELEC-H310**  
Digital electronics  | Dragomir MILOJEVIC (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 12h, practical work: 24h]  | second term  | English

**PROJ-H305**  
Projet de conception des structures  | Didier Snoeck (Coordinator) and Bertrand FRANCOIS  
5 credits [project: 150h]  | second term  | French

or

Module Electromécanique

**ELEC-H301**  
Electronique appliquée  | François QUITIN (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 12h, practical work: 24h]  | first term  | French
Brussels School of Engineering

**ELEC-H310**  
*Digital electronics* | Dragomir MILOJEVIC (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 12h, practical work: 24h]  
second term  
English

**ELEC-H312**  
*Power electronics* | Johan GYSELINCK (Coordinator)  
5 credits [lecture: 24h, practical work: 24h]  
second term  
English

**ELEC-H313**  
*Instrumentation* | Antoine NONCLERCQ (Coordinator)  
5 credits [lecture: 36h, practical work: 24h]  
second term  
French

**MATH-H304**  
*Automatique* | Michel KINNAERT (Coordinator)  
5 credits [lecture: 30h, practical work: 30h]  
second term  
French

**MECA-H303**  
*Cinématique et dynamique des machines* | Arnaud DERAEMAEKER (Coordinator), Alain DELCHAMBRE and Patrick HENDRICK  
5 credits [lecture: 24h, practical work: 36h]  
first term  
French

**MECA-H305**  
*Fluid mechanics II* | Gérard DEGREZ (Coordinator)  
5 credits [lecture: 36h, tutorial classes: 12h, practical work: 24h]  
second term  
English

**Module Informatique**

**ELEC-H301**  
*Electronique appliquée* | François QUITIN (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 12h, practical work: 24h]  
first term  
French

**ELEC-H310**  
*Digital electronics* | Dragomir MILOJEVIC (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 12h, practical work: 24h]  
second term  
English

**INFO-F201**  
*Systèmes d'exploitation* | Joël GOOSSENS (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 12h, practical work: 24h]  
first term  
French

**INFO-F307**  
*Génie logiciel et gestion de projets* | Frédéric PLUQUET (Coordinator)  
5 credits [lecture: 24h, practical work: 24h]  
first term  
French

**INFO-H3000**  
*Recherche opérationnelle* | Yves DE SMET (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 24h, personal assignments: 12h]  
second term  
French

**INFO-H303**  
*Bases de données* | Esteban ZIMANYI (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 24h, practical work: 12h]  
second term  
French

**INFO-H304**  
*Compléments de programmation et d'algorithme* | Jérémie ROLAND (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 24h, personal assignments: 30h]  
first term  
French

**Module physique**

**ELEC-H301**  
*Electronique appliquée* | François QUITIN (Coordinator)  
5 credits [lecture: 24h, tutorial classes: 12h, practical work: 24h]  
first term  
French

**ELEC-H304**  
*Physique des télécommunications* | Philippe DE DONCKER (Coordinator)  
5 credits [lecture: 36h, tutorial classes: 12h, practical work: 12h]  
second term  
French

**MATH-H301**  
*Compléments de mathématiques et de calcul numérique* | Artem NAPOV (Coordinator) and Anne DELANDTSHEER  
5 credits [lecture: 30h, tutorial classes: 12h, practical work: 18h]  
first term  
French

**MATH-H304**  
*Automatique* | Michel KINNAERT (Coordinator)  
5 credits [lecture: 30h, practical work: 30h]  
second term  
French

**PHYS-H300**  
*Physique des semi-conducteurs et de l'état solide* | Yves LOUIS (Coordinator)  
5 credits [lecture: 36h, tutorial classes: 12h, practical work: 12h]  
second term  
French
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<tr>
<th>Module Sciences biomédicales</th>
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<tbody>
<tr>
<td>BIME-H302 Biologie générale et anatomo-physiologie humaine</td>
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<td>CHIM-H312 Biological Chemistry</td>
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<td>ELEC-H3002 Instrumentation et Automatique</td>
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<td>INFO-H304 Compléments de programmation et d'algorithmique</td>
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<td>PROJ-H3000 Projet intégré biomédical</td>
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<th>Module Electronique et télécommunication</th>
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<td>ELEC-H301 Electronique appliquée</td>
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<td>ELEC-H304 Physique des télécommunications</td>
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<td>ELEC-H305 Circuits logiques et numériques</td>
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<td>ELEC-H309 Projet intégré</td>
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<td>ELEC-H314 Instrumentation et électronique analogique</td>
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<td>MATH-H304 Automatique</td>
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<th>Module Chimie et science des matériaux</th>
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<tr>
<td>CHIM-H302 Pollution du milieu physique</td>
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<td>CHIM-H310 Chimie physique moléculaire</td>
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<td>CHIM-H316</td>
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