












































Bloc 1 | BA-IRCIB | BA-IRCI

Cours obligatoires

- CHIM-H1001 **Chimie générales et procédés durables** | Philippe BOGAERTS (Coordinator) and Benoît HAUT
 10 credits [lecture: 60h, tutorial classes: 36h, practical work: 24h]  first and second terms  French
- INFO-H100 **Informatique** | Thierry MASSART (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h, practical work: 12h]  first term  French
- LANG-H1001 **Anglais I** | Matthew LANGSLEY (Coordinator)
 2 credits [tutorial classes: 24h]  second term  English
- MATH-H1002 **Analyse I** | Yves DE SMET (Coordinator)
 5 credits [lecture: 30h, tutorial classes: 30h]  second term  French
- MATH-H1003 **Algèbre linéaire et géométrie** | JérémY DOHET-ERALY (Coordinator)
 8 credits [lecture: 42h, tutorial classes: 54h]  first and second terms  French
- MATH-H1004 **Éléments d'analyse** | Yves DE SMET (Coordinator)
 2 credits [lecture: 18h, tutorial classes: 6h]  first term  French
- MECA-H100 **Mécanique rationnelle I** | Alain DELCHAMBRE (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 36h]  first and second terms  French
- PHYS-H1001 **Physique générale I** | Frédéric ROBERT (Coordinator)
 5 credits [lecture: 30h, tutorial classes: 12h, practical work: 12h]  first term  French
- PHYS-H1002 **Physique générale II** | Pascal KOCKAERT (Coordinator)
 5 credits [lecture: 30h, tutorial classes: 12h, practical work: 12h]  second term  French
- TRAN-H100 **Introduction aux sciences appliquées** | Dimitri GILIS (Coordinator)
 8 credits [lecture: 36h, tutorial classes: 60h]  first term  French
- TRAN-H101 **Projet multidisciplinaire I** | Benoît HAUT (Coordinator), Arnaud DERAEMAER and Pierre LAMBERT
 5 credits [practical work: 12h, project: 48h]  academic year  French

Bloc 2 | BA-IRCIB | BA-IRCI

Cours obligatoires

- CHIM-H2001 **Chimie physique, matériaux et fabrication, y compris les visites d'usine** | Stephane GODET (Coordinator), Frédéric DEBASTE, Patrick HENDRICK and Prakash VENKATESAN
 10 credits [lecture: 60h, tutorial classes: 12h, practical work: 48h]  academic year  French
- CNST-H2001 **Mécanique des solides et des structures** | Philippe BOUILLARD (Coordinator)
 5 credits [lecture: 30h, tutorial classes: 30h]  second term  French
- ELEC-H2001 **Electromagnétisme** | Frédéric ROBERT (Coordinator)
 5 credits [lecture: 18h, tutorial classes: 18h, practical work: 24h]  first term  French
- INFO-H2001 **Programmation orientée objet** | Hugues BERSINI (Coordinator)
 5 credits [lecture: 30h, tutorial classes: 30h]  second term  French
- LANG-H2002 **Anglais II** | Matthew LANGSLEY (Coordinator), Marco Vins DELLA MOTTA and Kelsey HULL
 3 credits [lecture: 24h, tutorial classes: 12h]  first term  English
- MATH-H2000 **Analyse II** | Jérémie ROLAND (Coordinator) and Thomas LESSINNES
 8 credits [lecture: 48h, tutorial classes: 48h]  first and second terms  French
- MATH-H2002 **Calcul des probabilités et statistiques** | Yves DE SMET (Coordinator)
 5 credits [lecture: 30h, tutorial classes: 30h]  first term
- MATH-H202 **Analyse numérique** | Artem NAPOV (Coordinator)
 4 credits [lecture: 24h, tutorial classes: 24h]  second term  French
- MECA-H200 **Mécanique rationnelle II** | Pierre LAMBERT (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h, practical work: 12h]  first term  French
- PHYS-H200 **Physique quantique et statistique** | Jean-Marc SPARENBERG (Coordinator)
 5 credits [lecture: 36h, tutorial classes: 24h]  second term  French
- TRAN-H201 **Projet multidisciplinaire II et gestion de projet** | Jérémie ROLAND (Coordinator) and Patrick SIMON
 5 credits [practical work: 12h, project: 120h]  academic year  French

Bachelor in Engineering Sciences

Option Bruxelles

BA-IRCI | BA-IRCIB | 2024-2025

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] first term French
- TRAN-H3001 **Epistémologie des sciences et éthique de l'ingénieur** | Céline KERMISCH (Coordinator)
 5 credits [lecture: 36h, seminars: 12h, personal assignments: 12h] second term French

An alternative chosen from the seven following

Module Construction

- CNST-H302 (optional) **Soil mechanics** | Alessia Cuccurullo (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h, practical work: 12h] first term English
- CNST-H303 (optional) **Analyse de structures** | Didier Snoeck (Coordinator)
 6 credits [lecture: 36h, tutorial classes: 36h] first term French
- CNST-H311 (optional) **Technologie et comportement du béton et des matériaux cimentaires** | Stéphanie STAQUET (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 12h, practical work: 24h] second term French
- CNST-H312 (optional) **Geology and engineering geology** | Pierre GERARD (Coordinator)
 5 credits [lecture: 24h, practical work: 36h] second term English
- CNST-Y302 (optional) **Civil engineering hydraulics** | Gerlinde LEFEVER (Coordinator)
 4 credits [lecture: 24h, tutorial classes: 24h] first term English
- ELEC-H310 (optional) **Digital electronics** | Dragomir MILOJEVIC (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 12h, practical work: 24h] second term English
- PROJ-H305 (optional) **Projet de conception des structures** | Didier Snoeck (Coordinator) and Alessia Cuccurullo
 5 credits [project: 150h] second term French

or

Module Electromécanique

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

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

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

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

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

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

MECA-H305 (optional) **Fluid mechanics II** | Thierry MAGIN (Coordinator)
⌚ 5 credits [lecture: 36h, tutorial classes: 12h, practical work: 12h] 📅 second term 🗨 English

or

Module Informatique

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

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

INFO-F201 (optional) **Systèmes d'exploitation** | Joël GOOSSENS (Coordinator) and Olivier MARKOWITCH
⌚ 5 credits [lecture: 24h, tutorial classes: 12h, practical work: 12h, project: 30h] 📅 first term 🗨 French

INFO-F307 (optional) **Génie logiciel et gestion de projets** | Frédéric PLUQUET (Coordinator)
⌚ 5 credits [lecture: 24h, practical work: 7h, project: 89h] 📅 second term 🗨 French

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

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

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

or

Module physique

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



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



MATH-H301 (optional) **Compléments de mathématiques et de calcul numérique** | Artem NAPOV (Coordinator), Thomas LESSINNES and Jérémie ROLAND
⌚ 5 credits [lecture: 30h, tutorial classes: 12h, practical work: 18h] 📅 first term 🗨 French

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

PHYS-H300 (optional) **Physique des semi-conducteurs et de l'état solide** | Yves LOUIS (Coordinator) and Nicolas PAULY
⌚ 5 credits [lecture: 36h, tutorial classes: 12h, practical work: 12h] 📅 second term 🗨 French






PHYS-H301 **Mécanique quantique I** | Nicolas CERF (Coordinator)
(optional) 5 credits [lecture: 24h, tutorial classes: 36h]  second term  French

PHYS-H302 **Éléments d'optique physique** | Pascal KOCKAERT (Coordinator) and François LEO
(optional) 5 credits [lecture: 24h, tutorial classes: 12h, practical work: 24h]  second term  French


or

Module Sciences biomédicales



BIME-H302 **Biologie générale et anatomo-physiologie humaine** | Hassan JIJAKLI (Coordinator) and Serge VAN SINT JAN
(optional) 10 credits [lecture: 84h, practical work: 36h]  second term  French

CHIM-H312 **Biological Chemistry** | Kristin BARTIK (Coordinator)
(optional) 5 credits [lecture: 36h, tutorial classes: 24h]  first term  English

ELEC-H3002 **Instrumentation et Automatique** | Michel KINNAERT (Coordinator) and Antoine NONCLERCQ
(optional) 5 credits [lecture: 48h, practical work: 12h]  second term  French



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

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

PROJ-H3000 **Projet intégré biomédical** | Antoine NONCLERCQ (Coordinator) and Michel KINNAERT
(optional) 5 credits [project: 150h]  second term  French



or

Module Electronique et télécommunication

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



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

ELEC-H305 **Circuits logiques et numériques** | Dragomir MILOJEVIC (Coordinator)
(optional) 5 credits [lecture: 30h, tutorial classes: 30h]  first term  French

ELEC-H309 **Projet intégré** | Frédéric ROBERT (Coordinator), Dragomir MILOJEVIC, Antoine NONCLERCQ and François QUITIN
(optional) 5 credits [project: 150h]  second term  French

ELEC-H311 **Signaux et systèmes de télécommunications** | Francois HORLIN (Coordinator)
(optional) 5 credits [lecture: 24h, tutorial classes: 12h, practical work: 24h]  first term  French



ELEC-H314 **Instrumentation et électronique analogique** | Antoine NONCLERCQ (Coordinator) and François QUITIN
(optional) 5 credits [lecture: 36h, practical work: 24h]  second term  French

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

or

Module Chimie et science des matériaux



CHIM-H302 **Pollution du milieu physique** | Michel VERBANCK (Coordinator) and Gilles BRUYLANTS
(optional) 5 credits [lecture: 40h, tutorial classes: 8h, practical work: 12h]  second term  French

CHIM-H310 **Chimie physique moléculaire** | Kristin BARTIK (Coordinator) and Nathalie VAECK
(optional) 5 credits [lecture: 42h, tutorial classes: 18h]  first term  French



CHIM-H314
(optional)

Introduction au génie des procédés | Benoît HAUT (Coordinator)

5 credits [lecture: 24h, tutorial classes: 24h, practical work: 12h]  second term  French



CHIM-H316
(optional)

Matériaux et chimie inorganique : mise en oeuvre et analyse | Marie-Paule DELPLANCHE (Coordinator) and Gilles BRUYLANTS

10 credits [lecture: 60h, tutorial classes: 12h, practical work: 48h]  academic year  French

ELEC-H301
(optional)

Electronique appliquée | François QUITIN (Coordinator)

5 credits [lecture: 24h, tutorial classes: 12h, practical work: 24h]  first term  French

MATH-H304
(optional)

Automatique | Michel KINNAERT (Coordinator)

5 credits [lecture: 30h, practical work: 30h]  second term  French

