

Bachelor in Mathematics

Mathematics with a secondary field to be chosen amongst Biology
Physics, informatics or economics.

Bloc 1 | BA-MATH

Cours obligatoires

- MATH-F101 [Calcul différentiel et intégral I](#) | Denis BONHEURE (Coordinator), Mélanie BERTELSON and Bruno PREMOSELLI
🕒 15 credits [lecture: 90h, tutorial classes: 90h] 📅 first and second terms 🗨️ French
- MATH-F104 [Logique et rédaction de preuves](#) | Dimitri LEEMANS (Coordinator)
🕒 10 credits [lecture: 36h, tutorial classes: 36h, project: 24h] 📅 first and second terms 🗨️ French
- MATH-F105 [Probabilités I](#) | Yves-Caoimhin SWAN (Coordinator)
🕒 5 credits [lecture: 30h, tutorial classes: 30h] 📅 second term 🗨️ French
- MATH-F121 [Géométrie analytique et calcul matriciel](#) | Michele D'ADDERIO (Coordinator) and Joost VERCRUYSSÉ
🕒 5 credits [lecture: 24h, tutorial classes: 24h] 📅 first term 🗨️ French
- MATH-F122 [Algèbre linéaire](#) | Michele D'ADDERIO (Coordinator), Samuel FIORINI and Joost VERCRUYSSÉ
🕒 10 credits [lecture: 54h, tutorial classes: 54h] 📅 first and second terms 🗨️ French












An option chosen from (the same in bloc 1, bloc 2 and bloc 3):

- B1-MATH-E [Module Mathématique - Economie](#) > page
- B1-MATH-I [Module Mathématique - Informatique](#) > page
- B1-MATH-P [Module Mathématique - Physique](#) > page

Bachelor in Mathematics

Bloc 2 | BA-MATH

Cours obligatoires

- LANG-F201 [Anglais scientifique I](#) | Alexander CORNFORD (Coordinator)
 5 credits [tutorial classes: 48h]  second term  English
- MATH-F201 [Calcul différentiel et intégral II](#) | Mélanie BERTELSON (Coordinator), Denis BONHEURE and Bruno PREMOSELLI
 10 credits [lecture: 60h, tutorial classes: 60h]  first and second terms  French
- MATH-F207 [Statistique mathématique I](#) | Thomas VERDEBOUT (Coordinator) and Davy PAINDAVEINE
 5 credits [lecture: 24h, tutorial classes: 24h]  first term  French
- MATH-F211 [Topologie](#) | Andriy Haydys (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h]  first term  French
- MATH-F223 [Théorie des groupes](#) | Dimitri LEEMANS (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h]  first term  French
- MATH-F224 [Anneaux et corps commutatifs](#) | Joost VERCRUYSE (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h]  second term  French



















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- B-MATH-E [Module Mathématique - Economie](#) > *page*
- B-MATH-I [Module Mathématique - Informatique](#) > *page*
- B-MATH-P [Module Mathématique - Physique](#) > *page*

Bachelor in Mathematics

Bloc 3 | BA-MATH

Cours obligatoires

- MATH-F3001 **Théorie de la mesure** | Mitia Duerinckx (Coordinator)
 5 credits [lecture: 30h, tutorial classes: 30h]  first term  French
- MATH-F3002 **Espaces fonctionnels et analyse de Fourier** | Denis BONHEURE (Coordinator) and Bruno PREMOSELLI
 5 credits [lecture: 30h, tutorial classes: 30h]  second term  French
- MATH-F302 **Probabilités II** | Yves-Caoimhin SWAN (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h]  second term  French
- MATH-F305 **Travail de recherche et communication scientifique** | Špela SPENKO (Coordinator) and Antoine GLORIA
 5 credits [project: 60h]  second term  French
- MATH-F306 **Optimisation** | Ignace LORIS (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h]  second term  French
- MATH-F309 **Statistique mathématique II** | Davy PAINDAVEINE (Coordinator) and Thomas VERDEBOUT
 5 credits [lecture: 24h, tutorial classes: 24h]  first term  French
- MATH-F310 **Differential geometry I** | Andriy Haydys (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h]  first term  English
- MATH-F323 **Courbes algébriques** | Špela SPENKO (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h]  first term  French
- MATH-F324 **Algèbre non commutative** | Špela SPENKO (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h]  second term  French

Options pour tous

A total of five credits chosen from the following

- BIOL-F318 (optional) **Histophysiologie et développement animal** | Jacob SOUOPGUI (Coordinator), Eric BELLEFROID and Anna Maria MARINI
 5 credits [lecture: 48h]  first term  French
- ECON-S3002 (optional) **Méthode et modélisation économique** | P.-Guillaume MEON (Coordinator)
 5 credits [lecture: 24h]  first term  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-F202 (optional) **Langages de programmation 2** | John IACONO (Coordinator)
 5 credits [lecture: 24h, practical work: 24h, project: 30h]  first term  French
- INFO-F302 (optional) **Informatique fondamentale** | Emmanuel FILIOT (Coordinator)
 5 credits [lecture: 36h, tutorial classes: 12h, project: 30h]  first term  French

- INFO-F305
(optional) **Modélisation et simulation** | Gianluca BONTEMPI (Coordinator)
⌚ 5 credits [lecture: 30h, tutorial classes: 24h, project: 6h] 📅 first term 🗨 French
- INFO-H303
(optional) **Bases de données** | Esteban ZIMANYI (Coordinator)
⌚ 5 credits [lecture: 24h, tutorial classes: 24h, practical work: 12h] 📅 second term 🗨 French
- PHYS-F103
(optional) **Physique** | Mustapha TLIDI (Coordinator)
⌚ 5 credits [lecture: 36h, tutorial classes: 24h] 📅 second term 🗨 French
- PHYS-F201
(optional) **Thermodynamique** | Nicolas CHAMEL (Coordinator)
⌚ 5 credits [lecture: 36h, tutorial classes: 24h] 📅 second term 🗨 French
- PHYS-F203
(optional) **Introduction à la mécanique quantique** | Laurens Vanderstraeten (Coordinator)
⌚ 5 credits [lecture: 30h, tutorial classes: 30h] 📅 second term 🗨 French
- PHYS-F317
(optional) **How To Make (almost) Any Experiment Using Digital Fabrication** | Denis TERWAGNE (Coordinator)
⌚ 5 credits [lecture: 24h, practical work: 36h] 📅 first term 🗨 French

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- B-MATH-E **Module Mathématique - Economie** > [page](#)
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Bachelor in Mathematics

Options | BA-MATH

Module Mathématique - Economie | B1-MATH-E

Bloc 1

Mathématique et économie

ECON-S1001 (option) **Introduction à la microéconomie et à la macroéconomie** | P.-Guillaume MEON (Coordinator), Renaud FOUCART and Julien RAVET
 15 credits [lecture: 72h, tutorial classes: 48h] academic year French

Bloc 2

Mathématique et économie

ECON-S201 (option) **Théorie macroéconomique I : le court terme en économie fermée et ouverte** | Robert KOLLMANN (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h] first term French

ECON-S202 (option) **Microeconomic theory : consumer and producer choice** | Bram DE ROCK (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h] second term English

ECON-S203 (option) **Théorie monétaire I** | Mathias DEWATRIPONT (Coordinator)
 5 credits [lecture: 36h] first and second terms French

INFO-F205 (option) **Calcul formel et numérique** | Maarten JANSEN (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h, project: 30h] second term French

INFO-F206 (option) **Informatique** | Olivier MARKOWITCH (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h, project: 12h] first term French

Bloc 3

Mathématique et économie

GEST-S318 (option) **Introduction to theoretical finance** | Laurent GHEERAERT (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h] second term English

STAT-S308 (option) **Introduction à l'économétrie** | Elise Petit (Coordinator) and Vincenzo VERARDI
 5 credits [lecture: 24h, tutorial classes: 24h] first term French

Module Mathématique - Informatique | B1-MATH-I

Bloc 1

Mathématique et informatique

INFO-F101 (option) **Programmation**
 10 credits [lecture: 36h, tutorial classes: 36h, practical work: 24h, project: 60h] first term French

INFO-F102 (option) **Fonctionnement des ordinateurs** | Gilles GEERAERTS (Coordinator)
 5 credits [lecture: 36h, practical work: 12h] first term French

Bloc 2

Mathématique et informatique

INFO-F103 (option) **Algorithmique 1** | Olivier MARKOWITCH (Coordinator) and Bernard FORTZ
 10 credits [lecture: 36h, tutorial classes: 36h, practical work: 24h, project: 60h] second term French





INFO-F106 (option) **Projets d'informatique 1** | Gwenaël JORET (Coordinator) and Tom LENAERTS
 5 credits [practical work: 24h, project: 120h]  first and second terms  French



INFO-F205 (option) **Calcul formel et numérique** | Maarten JANSEN (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h, project: 30h]  second term  French

MATH-F307 (option) **Mathématiques discrètes** | Michele D'ADDERIO (Coordinator) and Samuel FIORINI
 5 credits [lecture: 36h, tutorial classes: 24h]  first term  French

Bloc 3

Mathématique et informatique



INFO-F203 (option) **Algorithmique 2** | Jean CARDINAL (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h, project: 30h]  second term  French

INFO-F302 (option) **Informatique fondamentale** | Emmanuel FILIOT (Coordinator)
 5 credits [lecture: 36h, tutorial classes: 12h, project: 30h]  first term  French

Module Mathématique - Physique | B1-MATH-P

Bloc 1


Mathématique et physique

PHYS-F110 (option) **Physique générale I et II** | Pascal VANLAER (Coordinator), Michele SFERRAZZA and Sophie VAN ECK
 15 credits [lecture: 96h, tutorial classes: 84h]  first and second terms  French

Bloc 2

Mathématique et physique



INFO-F206 (option) **Informatique** | Olivier MARKOWITCH (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h, project: 12h]  first term  French

MATH-F204 (option) **Mécanique analytique** | Frank FERRARI (Coordinator) and Glenn BARNICH
 10 credits [lecture: 60h, tutorial classes: 60h]  first and second terms  French

PHYS-F202 (option) **Relativité, électromagnétisme et optique ondulatoire** | Petr TINIAKOV (Coordinator)
 10 credits [lecture: 72h, tutorial classes: 48h]  first and second terms  French

Bloc 3

Mathématique et physique

MATH-F3141 (option) **Analyse numérique pour les équations aux dérivées partielles** | Bernard KNAEPEN (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h]  first term  English/French

MATH-F3142 (option) **Introduction aux équations aux dérivées partielles** | Bruno PREMOSSELLI (Coordinator)
 5 credits [lecture: 24h, tutorial classes: 24h]  first term  French