

# Course offer\* for incoming Erasmus students

## Bachelor of Sciences at Hasselt University (2<sup>nd</sup> semester, academic year 2023-24)

Course \ Department		BIOLOGY		CHEMISTRY		COMPUTER SCIENCE		MATHEMATICS		PHYSICS	
		Contact : prof. dr. Ann Cuypers		Contact : prof. dr. An Hardy		Contact : prof. dr. Fabian Di Fiore		Contact : prof. dr. Roel Braekers		Contact : prof. dr. Bart Cleuren	
		Course name	ECTS	Course name	ECTS	Course name	ECTS	Course name	ECTS	Course name	ECTS
Compulsory course for all students		<a href="#">International Interdisciplinary Project (Ba)</a>	3	<a href="#">International Interdisciplinary Project (Ba)</a>	3	<a href="#">International Interdisciplinary Project (Ba)</a>	3	<a href="#">International Interdisciplinary Project (Ba)</a>	3	<a href="#">International Interdisciplinary Project (Ba)</a>	3
Discipline-related courses and projects	Courses	<a href="#">Biodiversity Exploration (Ba BIO)</a>	5	<a href="#">Colloid Chemistry (Ba CHEM)</a>	3	<a href="#">Information Visualisation (Ma CS)</a>	6	<a href="#">Functional &amp; Fourier Analysis (Ba MATH)</a>	5	<a href="#">Soft Condensed Matter (Ba PHYS)</a>	3
		<a href="#">Molecular Developmental Biology (Ba BIO)</a>	5	<a href="#">Polymeric Materials (Ba CHEM)</a>	3	<a href="#">Computational Complexity (Ma CS)</a>	6	<a href="#">Partial Differential Equations (Ba MATH)</a>	5	<a href="#">Nuclei and particles (Ba PHYS)</a>	6
		<a href="#">Parasitology and One Health (Ba BIO)</a>	3/5	<a href="#">Biochemical pathways (Ba CHEM)</a>	5	<a href="#">Database System Architecture (Ma CS)</a>	6	<a href="#">Numerical Methods 3 (Ba MATH)</a>	5	<a href="#">Photonics and Quantum Technology (Ba PHYS)</a>	5
		<a href="#">Ecology: organisms and their environment (Ba BIO)</a>	8	<a href="#">Molecular Developmental Biology (Ba CHEM)</a>	5	<a href="#">Computer Animation and Simulation (Ma CS)</a>	6	<a href="#">Nonparametric methods (1 Ma STATS &amp; DS)</a>	4	<a href="#">Quantum Effects in Biology (Ba PHYS)</a>	5
		<a href="#">Biochemical pathways (Ba BIO)</a>	5	<a href="#">Environmental Chemistry (1 Ma BMS-EHS)</a>	3	<a href="#">Advanced Programming in Python (1 Ma STAT &amp; DS)</a>	5	<a href="#">Concepts of Bioinformatics (1 Ma STATS &amp; DS)</a>	4	<a href="#">Functional &amp; Fourier Analysis (Ba MATH)</a>	5
		<a href="#">Environmental Ethics (1Ma BMS-EHS)</a>	3	<a href="#">Functional Polymers for Advanced Applications (1Ma BMS-EHS)</a>	3	<a href="#">Designing Interactive Systems (Ba CS, taught in Dutch, English course materials)</a>	3	<a href="#">Introduction to Bayesian Inference (1 Ma STAT &amp; DS)</a>	4		
		<a href="#">Bio-indicators (1Ma BMS-EHS)</a>	3	<a href="#">Nanomedicine (1Ma BMS-BEN/EHS)</a>	4	<a href="#">Operating Systems (Ba CS, taught in Dutch, English course materials)</a>	4	<a href="#">Visualisation in Data Science (1 Ma STAT&amp;DS)</a>	4		
		<a href="#">Environmental Chemistry (1 Ma BMS-EHS)</a>	3			<a href="#">Technologies and Tools for Interactive Systems Development (Ma CS, taught in Dutch, English course materials)</a>	6				
	Projects	<a href="#">Final Project (Ba BIO)</a>	10	<a href="#">Final Project Material Chemistry (Ba CHEM)</a>	15	<a href="#">Final Project (Ba CS)</a>	10	<a href="#">Final Project (Ba MATH)</a>	10	<a href="#">Final Project (Ba PHYS)</a>	9
				<a href="#">Final Project Biochemistry (Ba CHEM)</a>	10						
Other courses **		<a href="#">Visualisation in Data Science (1 Ma STAT&amp;DS)</a>	4	<a href="#">Visualisation in Data Science (1 Ma STAT&amp;DS)</a>	4	<a href="#">Artificial Neural Networks and Deep Learning ( Ma Stats &amp; DS)</a>				<a href="#">Visualisation in Data Science (1 Ma STAT&amp;DS)</a>	4

\*The course offer is subject to changes.

\*\* The broadening courses might require some foreknowledge or skill in the area of the course:

- Visualisation in Data Science: the student needs to have acquired some computer programming experience through an initial programming course at the home university, preferably in Python. Knowledge of JavaScript is considered beneficial.
- Artificial Neural Networks and Deep Learning: the student needs to successfully taken a course on machine learning and needs to have substantial knowledge of statistics.

### NOTES :

- All courses in this overview will be taught in English, unless explicitly mentioned otherwise. Most course names are hyperlinked to the [study guide of Hasselt University](#), where more information on the course can be found. **Carefully check whether you meet the course foreknowledge requirements, described in the study guide, before selecting a course in your exchange study programme.** For more information: do contact the departmental coordinator (see above) or administrative coordinator [Peter Vandoren](#).
- The 2<sup>nd</sup> semester of the academic year 2023-24 starts on Monday February 12 2024 and ends on July 3 2024 (including exam period).