

Exchange Students Course List 2018/2019

List of courses taught in English at the [Faculty of Bioscience Engineering](#) and open for exchange students

CODE + LINK	COURSE	CREDITS	SEMESTER	REMARKS
Master of Bioscience engineering: Human Health Engineering				
IOP05C	Biofluidics	3 ECTS	1	
IOV02A	Integration of Biological Responses in Process Management	6 ECTS	1	
IOV05A	Identification and Control of Biotechnical Processes	6 ECTS	1	
IOV08A	Optics, Lasers and Acoustics	5 ECTS	1	
IOT95A	Human Health Data Processing	6 ECTS	1	
IOT97A	Functional Anatomy of the Human Locomotor System	3 ECTS	1	
IOV01A	Nutrition and Metabolism	4 ECTS	1	
H06F4A	Biosensors and Bioelectronics	3 ECTS	2	
IOU02A	Musculoskeletal Biomechanics: Measuring and Modelling	7 ECTS	1 + 2	
IOU00A	Seminars Human Health Engineering	6 ECTS	2	

Master of Bioinformatics				
H06F6A	Structure, Synthesis and Cellular Function of Macromolecules	3 ECTS	1	
I0D33A	Basics of Biological Chemistry	4 ECTS	1	
I0D34A	Basic Concepts of Cell Biology	5 ECTS	1	

I0D35A	Introduction to Genetics	5 ECTS	1	
I0D36B	Gene Technology	4 ECTS	1	
I0D38B	Linear Algebra	7 ECTS	1	
I0D39C	Calculus	5 ECTS	1	
I0D41A	Basic Programming	4 ECTS	1	
I0U35A	Univariate Data and Modelling	5 ECTS	1	
H02C5A	Object Oriented Programming	4 ECTS	2	
I0P16B	Applied Multivariate Statistical Analysis	5 ECTS	1	
I0U30A	Practical Computing for Bioinformatics	3 ECTS	1	
I0D50A	Bayesian Modeling for Biological Data Analysis	4 ECTS	1	
I0D53A	Evolutionary and Quantitative Genetics	4 ECTS	1	
I0U29A	Comparative and Regulatory Genomics	4 ECTS	1	
I0D43A	Molecular Interactions: Theories and Methods	4 ECTS	2	
I0D44A	Structural Bioinformatics	5 ECTS	2	
I0D45A	Model Organisms	5 ECTS	2	
I0D48A	Dynamical Systems	4 ECTS	2	
I0U31A	Statistical Methods for Bioinformatics	5 ECTS	2	
I0U28B	Omics Techniques and Data Analysis	5 ECTS	2	
I0U19A	Management of Large-Scale Omics Data	4 ECTS	2	
Master of Biosystems Engineering				
I0P16B	Applied Multivariate Statistical Analysis	5 ECTS	1	
I0A86A	Sustainable Precision Livestock Farming	5 ECTS	1	
I0P18A	Agricultural Robotics	5 ECTS	1	
H06C9A	Microsystems and Sensors	3 ECTS	1	
I0T97A	Functional Anatomy of the Human Locomotor System	3 ECTS	1	
I0U02A	Musculoskeletal Biomechanics: Measuring and Modelling	7 ECTS	1 + 2	
I0U00A	Seminars Human Health Engineering	6 ECTS	2	

I0V14A	Engineering Properties of Biological Materials	5 ECTS	2	
I0P09B	Biosensor Technology and Bio-electronics	6 ECTS	2	
I0P50B	Nanobiology	5 ECTS	2	
H06X4B	Micro & Nanofluidics	3 ECTS	2	
I0Q79B	Biomachines and Biomimetics	3 ECTS	2	
H06F4A	Biosensors and Bio-electronics	3 ECTS	2	
I0T95A	Human Health Data Processing	6 ECTS	1	

Master of Food Technology

I0R00A	Mathematical Planning and Advanced Statistics	4 ECTS	1	
I0R02A	Low Temperature Processing of Foods	5 ECTS	1	
I0R07A	Postharvest Pest Management and Disease Control	4 ECTS	1	
I0R35A	Fruit and Vegetable Technology	4 ECTS	1	
I0R02A	Low Temperature Processing of Foods	5 ECTS	1	
I0P88A	HACCP-concepts and Quality Assurance Workshop	4 ECTS	1	
I0V32A	Food Rheology	4 ECTS	2	
I0V34A	Sensory Science	4 ECTS	2	
I0Q96A	Postharvest Physiology and technology	5 ECTS	2	
I0Q99B	Human Nutrition	5 ECTS	2	
I0Q88A	Transport Phenomena and Engineering Kinetics	7 ECTS	2	
I0Q94A	Thermal Processing of Foods	8 ECTS	2	
I0P40A	Food Packaging and Transportation	4 ECTS	2	
I0R27A	Cereal Science and Technology	4 ECTS	2	
I0V14A	Engineering Properties of Biological Materials	5 ECTS	2	

Master of Water Resources Engineering

I0A99B	Advanced Mathematics for Water Engineering	5 ECTS	1	
I0D18B	Groundwater Hydrology	5 ECTS	1	Taught at VUB
I0D14C	Irrigation Agronomy	5 ECTS	2	

I0D15B	Aquatic Ecology	5 ECTS	1	
I0V94A	GIS & Data Processing for Water Resources	6 ECTS	1	
I0D21A	Systems Approach to Water Management	5 ECTS	1	Taught at VUB
I0D22A	Social, Political, Institutional, Economic and Environmental Aspects of Water Resources	5 ECTS	1	Taught at VUB
I0D23A	Surface Water Modelling	5 ECTS	1	Taught at VUB
I0D24A	Groundwater Modelling	5 ECTS	1	Taught at VUB
I0D25A	River Modelling	5 ECTS	1	
I0D26A	Soil Water Modelling	5 ECTS	1	
I0D27A	Irrigation Design and Crop Water Productivity Management (new title)	5 ECTS	1	
I0D71A	Urban Hydrology and Hydraulics	5 ECTS	1	Taught at VUB
I0D32B	Surface Water Hydrology	5 ECTS	1	Taught at VUB
I0D13B	Statistics for Water Engineering	5 ECTS	2	
I0D17B	Hydraulics	5 ECTS	2	
I0V93A	Water Quality	4 ECTS	2	Taught at VUB
I0V87A	Integrated Water Management	5 ECTS	1	Taught at VUB
I0V89A	Waste Water Treatment and Resource Recovery	4 ECTS	2	
I0V95A	Remote Sensing Measuring Techniques for Water Resources Engineering	6 ECTS	2	Taught at VUB
I0W00A	Environmental programming	5 ECTS	1	Taught at VUB
I0W57A	Land-Climate Dynamics	5 ECTS	1	NEW

Master of Agro- and Ecosystems Engineering

I0V48A	Tropical Soil Science	3 ECTS	1	Every 2 years
H03B9B	Applied Soil and Aquatic Chemistry	5 ECTS	1	
I0A90A	Earth Observation	5 ECTS	1	
I0A94A	Ecological Data Processing	4 ECTS	1	
I0D26A	Soil Water Modelling	5 ECTS	1	
I0D27A	Irrigation Design and Crop Water Productivity Management	5 ECTS	1	
I0D80A	Advanced GIS-Concepts and Applications	6 ECTS	1	
I0P16B	Applied Multivariate Statistical Analysis	5 ECTS	1	

IOQ19B	Plant Physiology	6 ECTS	1	
IOQ23B	Agricultural Economics and Food Policy in Developing Countries	6 ECTS	1	
IOU37A	Biodiversity and Ecosystem Services	4 ECTS	1	
IOU40B	Applied Bioeconomics and Policy	6 ECTS	2	
IOU73A	Urban Ecology and Green Management	4 ECTS	1	
IOU86A	Agro-Systems	6 ECTS	1	Every 2 years
IOU89B	Applied Soil Science and Soil Geography	5 ECTS	1	Every 2 years
IOU55A	Land Evaluation and Land Use Planning	5 ECTS	1	
IOU79A	Planning for Forestry and Nature Conservation	5 ECTS	2	
IOD59B	Land Cover and Land Use Monitoring	4 ECTS	1	
IOD62A	Remote Sensing of Vegetative Systems	6 ECTS	2	
IOP45B	Tropical Forestry	4 ECTS	2	
IOR89B	Natural Resources Economics and Policy	5 ECTS	2	
IOS68A	Global Biogeochemical Cycles	4 ECTS	2	
IOU46A	Silviculture	5 ECTS	2	
IOU47A	Hydrological Processes	5 ECTS	2	
IOU87B	Plant Nutrition and Soil Fertility	8 ECTS	2	
IOU88A	Plant Disease Biology and Management	5 ECTS	2	
IOU90A	Crop Production	6 ECTS	2	
IOU92B	Developmental Physiology of Higher Plants	4 ECTS	2	
IOU99A	Spatial Data Infrastructures	6 ECTS	2	
IOV39A	Tropical Soil Fertility Management	3 ECTS	2	
IOW44A	Irrigation and Drainage	5 ECTS	2	

Master of Molecular Biology

	High Throughput Techniques	5 ECTS	1	Taught at VUB
	Bioinformatics and Omics	5 ECTS	1	Taught at VUB
	Molecular Pharmacology	3 ECTS	1	Taught at VUB
	Cell Biology and Cell Signaling	3 ECTS	1	Taught at VUB
	Analytical Biochemistry	3 ECTS	1	Taught at VUB
	Molecular Microbiology	3 ECTS	1	Taught at VUB

	Plant Molecular Biology	3 ECTS	1	Taught at VUB
	Immunology	5 ECTS	2	Taught at VUB
	Research Communication Skills	3 ECTS	1+2	Taught at VUB
	Genetics and Genetic Engineering	5 ECTS	2	Taught at VUB
	Molecular Parasitology	3 ECTS	2	Taught at VUB
	Vaccine Technology	3 ECTS	2	Taught at VUB
	Protein Structure and Function	3 ECTS	2	Taught at VUB
I0U88A	Plant Disease Biology and Management	5 ECTS	2	
I0R75C	Applied Biotechnology in Livestock Production	4 ECTS	2	
I0R71A	Phytopathology	4 ECTS	2	Only in 2018-2019
I0R72A	Biocontrol of Plant Diseases and Biofertilisation	4 ECTS	2	Only in 2018-2019
I0R74B	Prophylaxis of Infectious Diseases of Farm Animals	3 ECTS	2	Only in 2018-2019
I0R75C	Applied Biotechnology in Livestock Production	4 ECTS	2	Only in 2018-2019
I0R76B	Livestock Genetics	5 ECTS	2	Only in 2018-2019
I0R77A	Human Infectious Diseases	4 ECTS	2	Only in 2018-2019 Taught at VUB
I0R78A	Epidemiology: Study Design and Analysis	4 ECTS	2	Only in 2018-2019 Taught at VUB
I0R79A	Human Genetics and Diseases	4 ECTS	2	Only in 2018-2019 Taught at VUB
I0R64A	Advanced and Applied Molecular Biology	5 ECTS	1	Only in 2018-2019 Taught at VUB
I0R65A	Advanced Microbial Genetics and Virology	4 ECTS	1	Only in 2018-2019 Taught at VUB
I0R68A	Physical Chemistry and Structural Analysis of Macromolecules	4 ECTS	1	Only in 2018-2019

				Taught at VUB
I0R69A	Social and Economical Aspects of Biotechnology	5 ECTS	1	Taught at VUB
I0R73A	Plant Biodiversity	4 ECTS	2	Only in 2018-2019
Additional courses				
I0N62A	Geographic Information Systems	4 ECTS	1	
I0P65A	Ecosystems Modelling	5 ECTS	2	Every 2 years
I0P49A	Bioinformatics and Genome Technology	6 ECTS	2	
I0W36A	Transport Phenomena in Bioscience Engineering	5 ECTS	2	
I0O15A	Bioinformatics	4 ECTS	1	
I0V83A	Bioconversion Technology	5 ECTS	1	