

Courses taught in English.

Sector: science and technology

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LEGENDE

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 **BACHELOR** (LICENCE 1)

 **BACHELOR** (LICENCE 2)

 **BACHELOR** (LICENCE 3)

 **MASTER 1**

 **MASTER 2**

MATHEMATICS

HIGH PERFORMANCE COMPUTING -
SCIENTIFIC CALCULATION

Level : **MASTER 2**

SEMESTER : AUTUMN

- **REFRESHER COURSE IN NUMERICAL METHODS**
5 CRÉDITS (ETCS)
- **REFRESHER COURSE IN ALGORITHMS AND COMPUTATION**
5 CRÉDITS (ETCS)
- **REFRESHER COURSE IN MODELING**
5 CRÉDITS (ETCS)
- **SEMINAR**
2 CRÉDITS (ETCS)
- **MATHEMATICAL TOOLS FOR THE SIMULATION**
7 CRÉDITS (ETCS)
- **SUPERCOMPUTING**
7 CRÉDITS (ETCS)
- **INTERNATIONAL ENTERPRISE PROJECT MANAGEMENT, EMPLOYMENT LAW AND SOCIAL SECURITY LAW**
4 CRÉDITS (ETCS)

SEMESTER : SPRING

- **SCIENTIFIC COMPUTING FOR MECHANICS**
5 CRÉDITS (ETCS)
- **SCIENTIFIC COMPUTING FOR ELECTROMAGNETIC FIELD COMPUTATION**
5 CRÉDITS (ETCS)
- **SCIENTIFIC COMPUTING FOR BIOINFORMATICS**
5 CRÉDITS (ETCS)
- **FROM MODELING TO NUMERICAL SIMULATION**
5 CRÉDITS (ETCS)
- **SCIENTIFIC COMPUTING FOR COMPUTER SCIENCE**
5 CRÉDITS (ETCS)
- **SCIENTIFIC COMPUTING FOR NON LINEAR OPTICS AND PHOTONICS**
5 CRÉDITS (ETCS)
- **SCIENTIFIC COMPUTING FOR OPTIMIZATION**
5 CRÉDITS (ETCS)
- **SCIENTIFIC COMPUTING FOR MATERIAL SCIENCE**
5 CRÉDITS (ETCS)

PHYSICS

ATMOSPHERE ENVIRONMENT

Level : **MASTER 2**

SEMESTER : AUTUMN

- **ELECTRONIC STRUCTURE AND VIBRATION-ROTATION SPECTROSCOPY**
30 CRÉDITS (ETCS)
- **ADVANCED ANALYSIS METHODS OF ATMOSPHERIC SPECIES**
30 CRÉDITS (ETCS)
- **RADIATIVE TRANSFER IN THE ATMOSPHERE**
30 CRÉDITS (ETCS)
- **REACTIVITY IN HOMOGENEOUS AND HETEROGENEOUS PHASES**
30 CRÉDITS (ETCS)
- **PHYSICS AND CHEMISTRY OF THE ATMOSPHERE**
30 CRÉDITS (ETCS)
- **SPECTROSCOPIC AND OPTICAL METHODS**
30 CRÉDITS (ETCS)
- **OBSERVATION SYSTEMS FOR ATMOSPHERIC COMPOSITION**
30 CRÉDITS (ETCS)
- **RECHERCHE EN LABORATOIRE**
30 CRÉDITS (ETCS)

COMPUTER SCIENCE AND ELECTRONICS

ELECTRICAL ENGINEERING FOR
SUSTAINABLE DEVELOPMENT (E2SD)

Level : **MASTER 2**

SEMESTER : AUTUMN

- **ENGLISH AND COMMUNICATION 3**
5 CRÉDITS (ETCS)
- **BIBLIOGRAPHIC RESEARCH PROJET**
5 CRÉDITS (ETCS)
- **ELECTROMAGNETIC CONVERSION AND
ECO-DESIGN**
5 CRÉDITS (ETCS)
- **ENERGY CONVERSION**
5 CRÉDITS (ETCS)
- **SUSTAINABLE DEVELOPMENT
APPLICATIONS**
5 CRÉDITS (ETCS)
- **ADVANCED TRANSPORTATION
SYSTEMS**
5 CRÉDITS (ETCS)
- **ELECTRICAL SYSTEM AND RENEWABLE
ENERGY PRODUCTION**
5 CRÉDITS (ETCS)

SEMESTER : SPRING

- **TRAINING**
20 CRÉDITS ETCS
- **PROJECT**
10 CRÉDITS ETCS

COMPUTER SCIENCE

DATA SCIENCE

Level : **MASTER 1**

SEMESTER : AUTUMN

- **(OPTIONAL) REFRESHER IN MATHS AND COMPUTER SCIENCE**
3 CREDITS (ETCS)
- **MACHINE LEARNING**
3 CREDITS EACH (ETCS)
EC1: MACHINE LEARNING 1, HANDS ON
EC2: MACHINE LEARNING 2, THE LANDSCAPE OF MACHINE LEARNING
- **MATHEMATICS FOR DATA SCIENCE 1**
3 CREDITS EACH (ETCS)
EC1: FUNDAMENTAL NOTIONS OF MATHEMATICS
EC2: PROBABILITY 1
EC3: STATISTICS 1
- **COMPUTER SCIENCE 1**
3 CREDITS EACH (ETCS)
EC1: DATABASES 1
EC2: ALGORITHMS AND THEIR COMPLEXITY 1
- **TOOLS, PROJECTS & SEMINARS**
3 CREDITS EACH (ETCS)
EC1: PYTHON & TOOLS FOR RESEARCH
EC2: RESEARCH PROJECT
EC3: SEMINARS

SEMESTER : SPRING

- **MATHEMATICS FOR DATA SCIENCE 2**
3 CREDITS EACH (ETCS)
EC1: PROBABILITY 1
EC2: STATISTICS 1
- **OPTIMIZATION AND ALGORITHMS**
3 CREDITS EACH (ETCS)
EC1: NUMERICAL ANALYSIS AND OPTIMIZATION
EC2: ALGORITHMS AND THEIR COMPLEXITY 2
- **MACHINE LEARNING & SIGNAL PROCESSING**
3 CREDITS EACH (ETCS)
EC1: MODELS FOR MACHINE LEARNING
EC2 : SIGNAL PROCESSING
- **APPLIED MACHINE LEARNING**
3 CREDITS EACH (ETCS)
EC1: DEEP LEARNING
EC2: DATA CHALLENGE (KAGGLE)
- **DATA SCIENCE AND ITS ENVIRONMENT**
3 CREDITS EACH (ETCS)
EC1 : ETHICS AND LAW
EC2 : RESEARCH PROJECT
EC3 : SEMINARS
- **STAGE DE 8 À 14 SEMAINES**
EN LABORATOIRE OU ENTREPRISE

POLYTECH

MEASUREMENT SYSTEMS AND APPLIED
BUSINESS

MECHANICAL, ELECTRICAL AND
COMPUTER, SOFTWARE ENGINEERING
AND STATISTICS, CIVIL, BIOLOGICAL
SCIENCE AND FOOD ENGINEERING

MATERIALS SCIENCE

These courses are only offered to exchange students coming to Polytech Lille for a semester of study or an academic year within the partnerships or exchange programmes in engineering

SEMESTER : SPRING/ AUTUMN

**[HTTP://WWW.POLYTECH-LILLE.FR/
COURSES-HELD-IN-ENGLISH-IN-2018-
2019-P7498.HTML#.XKS618TGO72](http://www.polytech-lille.fr/courses-held-in-english-in-2018-2019-p7498.html#.XKS618TGO72)**

CHEMISTRY

PHYSICAL AND ANALYTICAL

Level : **MASTER 1**
ADVANCED SPECTROSCOPY IN
CHEMISTRY

SEMESTER : AUTUMN

- **NUCLEAR MAGNETIC RESONANCE**
5 CREDITS (ECTS)
- **OPTICAL SPECTROSCOPY**
5 CREDITS (ECTS)
- **QUANTUM CHEMISTRY AND CHEMICAL BOUND**
5 CREDITS (ECTS)
- **ENGLISH**
5 CREDITS (ECTS)
- **2 UNITS TO CHOOSE :**
5 CREDITS EACH (ECTS)
X-RAY DIFFRACTION

DATA PROCESSING AND DATA
ANALYSIS IN PHYSICAL-CHEMISTRY

MASS SPECTROMETRY

SEMESTER : SPRING

- **PHYSICAL ORGANIC CHEMISTRY**
5 CRÉDITS (ECTS)
- **METHODOLOGIES IN INORGANIC CHEMISTRY**
5 CRÉDITS (ECTS)
- **IMAGING AND CHEMOMETRICS**
5 CRÉDITS (ECTS)
- **ADVANCED CHEMICAL KINETICS AND CATALYSIS**
5 CRÉDITS (ECTS)
- **2 UNITS TO CHOOSE:**
5 CREDITS EACH (ECTS)
EXPERIMENTAL METHODOLOGIES IN
ENVIRONMENTAL SCIENCES

SPECTROSCOPY FOR BIOLOGY

APPLIED MOLECULAR SPECTROSCOPY

SYNCHROTRON RADIATION AND ITS
APPLICATIONS

CHEMISTRY

PHYSICAL AND ANALYTICAL

Level : **MASTER 2**
**ADVANCED SPECTROSCOPY IN
CHEMISTRY**

SEMESTER : AUTUMN

- **ADVANCED ANALYSIS METHODS OF ATMOSPHERIC COMPOUNDS**
5 CRÉDITS (ECTS)
- **REACTIVITY IN HOMOGENEOUS AND HETEROGENEOUS PHASES**
5 CRÉDITS (ECTS)
- **PHYSICS AND CHEMISTRY OF THE ATMOSPHERE**
5 CRÉDITS (ECTS)
- **ADVANCED SPECTROSCOPIC TECHNIQUES FOR ENVIRONMENTAL ANALYSIS** 5 CRÉDITS (ECTS)
- **OBSERVATION SYSTEMS FOR ATMOSPHERIC MONITORING**
5 CRÉDITS (ECTS)
- **ADVANCED ENGLISH/FRENCH**
5 CRÉDITS (ECTS)

SEMESTER : SPRING

- **RESEARCH INTERSHIP**
30 CRÉDITS (ECTS)

CHEMISTRY

MASTER BIOREFINERY

Level : **MASTER 2**

SEMESTER : AUTUMN

- **PLANT BIOMASS PRODUCTION AND VALORISATION**
5 CRÉDITS (ETCS)
- **BIO AND CHEMICAL PROCESSES**
5 CRÉDITS (ETCS)
- **BIOMASS PRETREATMENT AND THERMAL TREATMENT**
5 CRÉDITS (ETCS)
- **CHEMICALS AND FUELS FROM BIOMASS**
10 CRÉDITS (ETCS)
- **ENGLISH**
5 CRÉDITS (ETCS)

SEMESTER : SPRING

- **LAB RESEARCH**
25 CRÉDITS (ETCS)
- **BIBLIOGRAPHIC REVIEW**
5 CRÉDITS (ETCS)

CHEMISTRY

MASTER PHYSICAL AND ANALYTICAL
CHEMISTRY

Level : **MASTER 2**
ATMOSPHERIC ENVIRONMENT

SEMESTER : AUTUMN

- **CHARACTERISATION OF
NANOSTRUCTURED AND DISORDER
SOLIDS**
10 CRÉDITS (ETCS)

- **INTERNSHIP AND TRANSFERABLE
SKILLS**
10 CRÉDITS (ETCS)

- **2 OPTIONS :**
5 CRÉDITS EACH (ETCS)
ORGANIC PHOTOCHEMISTRY

MOLECULAR MODELING

**ADVANCED ANALYSIS METHODS OF
ATMOSPHERIC SPECIES**

**REACTIVITY IN HOMOGENEOUS AND
HETEROGENEOUS PHASES**

SEMESTER : SPRING

- **MASTER THESIS**
30 CRÉDITS (ETCS)

GEOGRAPHY

AND URBAN PLANNING

Level : **MASTER 2 (EUROSTUDIES)**

SEMESTER : AUTUMN

- **PRINCIPLES OF TERRITORIAL DEVELOPMENT IN EUROPE**
5 CRÉDITS (ECTS)
- **INSTITUTIONS AND PUBLIC POLICIES IN EUROPE**
5 CRÉDITS (ECTS)
- **THE EUROPEAN UNION, ACTOR AND PARTNER OF URBAN AND TERRITORIAL DEVELOPMENT**
5 CRÉDITS (ECTS)
- **MAKING AND PLANNING THE CITY AND THE TERRITORY IN EUROPE**
5 CRÉDITS (ECTS)
- **COOPERATION IN THE EUROPEAN FRAMEWORK, PRINCIPLES AND ISSUES**
5 CRÉDITS (ECTS)
- **CONCEIVING AND CONDUCTING CROSSDORDER PLANNING PROJECTS**
5 CRÉDITS (ECTS)

SEMESTER : SPRING

- **GROUP WORKSHOP**
10 CRÉDITS (ECTS)
- **PROFESSIONAL INTERSHIP AND DISSERTATION**
20 CRÉDITS (ECTS)

GEOGRAPHY

PALEONTOLOGY - PALEOCLIMATOLOGY
(PALEO)

Level : **MASTER 2**

SEMESTER : AUTUMN

- **MICROPALEONTOLOGY**
5 CRÉDITS (ECTS)
- **BIOGEOCHRONOLOGY AND APPLIED
CASE STUDIES**
5 CRÉDITS (ECTS)
- **QUANTITATIVE PALEONTOLOGY**
5 CRÉDITS (ECTS)
- **PALEOCLIMATOLOGY - GEOBIOLOGY**
5 CRÉDITS (ECTS)

BIOLOGY

BACHELOR IN LIFE SCIENCES,
CELL BIOLOGY AND PHYSIOLOGY
SPECIALISATION

**BILINGUAL TRACK (FRENCH +
ENGLISH)**

BACHELOR 1 (LICENCE 1)

SEMESTER : AUTUMN

- **CHEMISTRY APPLIED TO LIFE SCIENCES**
5 CRÉDITS (ECTS)
- **ANIMAL BIOLOGY 1**
5 CRÉDITS (ECTS)
- **CELL BIOLOGY 1**
5 CRÉDITS (ECTS)
- **ORGANIC CHEMISTRY 1**
5 CRÉDITS (ECTS)
- **MATHEMATICS APPLIED TO LIFE SCIENCES**
4 CRÉDITS (ECTS)
- **TRANSVERSAL UNIT : PERSONAL PROFESSIONAL PROJECT**
2 CRÉDITS (ECTS)

SEMESTER : SPRING

- **PLANT BIOLOGY 1**
5 CRÉDITS (ECTS)
- **BIOCHEMISTRY 1 : LIFE MOLECULES**
5 CRÉDITS (ECTS)
- **GENETICS 1: FORMAL AND MOLECULAR GENETICS**
5 CRÉDITS (ECTS)
- **FROM ATOM TO THE COMPLEX MOLECULE**
5 CRÉDITS (ECTS)
- **FROM THE CELL TO THE ORGANISM IN ITS ECOSYSTEM**
5 CRÉDITS (ECTS)
- **MAIN ANIMAL PHYSIOLOGICAL FUNCTIONS**
5 CRÉDITS (ECTS)

***A C1 LEVEL IN FRENCH AND A B2 LEVEL IN ENGLISH ARE REQUESTED TO FOLLOW THE COURSES BELOW**

BIOLOGY

BACHELOR IN LIFE SCIENCES,
POPULATION AND ORGANISMS
BIOLOGY SPECIALISATION

**BILINGUAL TRACK (FRENCH +
ENGLISH)**

Level : **BACHELOR 1** (LICENCE 1)

SEMESTER : AUTUMN

- **CHEMISTRY APPLIED TO LIFE SCIENCES**
5 CRÉDITS (ECTS)
- **ANIMAL BIOLOGY 1**
5 CRÉDITS (ECTS)
- **CELL BIOLOGY 1**
5 CRÉDITS (ECTS)
- **ORGANIC CHEMISTRY 1**
5 CRÉDITS (ECTS)
- **MATHEMATICS APPLIED TO LIFE SCIENCES**
4 CRÉDITS (ECTS)
- **PHYSICS APPLIED TO LIFE SCIENCES**
4 CRÉDITS (ECTS)

SEMESTER : SPRING

- **PLANT BIOLOGY 1**
5 CRÉDITS (ECTS)
- **BIOCHEMISTRY 1 : LIFE MOLECULES**
5 CRÉDITS (ECTS)
- **GENETICS 1 : FORMAL AND MOLECULAR GENETICS**
5 CRÉDITS (ECTS)
- **FROM ATOM TO THE COMPLEX MOLECULE**
5 CRÉDITS (ECTS)
- **MAIN ANIMAL PHYSIOLOGICAL FUNCTIONS**
5 CRÉDITS (ECTS)

***A C1 LEVEL IN FRENCH AND A B2 LEVEL IN ENGLISH ARE REQUESTED TO FOLLOW THE COURSES BELOW**

BIOLOGY

BACHELOR IN LIFE SCIENCES,
CELL BIOLOGY AND PHYSIOLOGY
SPECIALISATION

**BILINGUAL TRACK (FRENCH +
ENGLISH)**

BACHELOR 2 (LICENCE 2)

SEMESTER : AUTUMN

- **MICROBIOLOGY 1**
5 CRÉDITS (ECTS)
- **BIostatISTICS 1**
5 CRÉDITS (ECTS)
- **PLANT PHYSIOLOGY 1**
5 CRÉDITS (ECTS)
- **GENERAL ECOLOGY**
5 CRÉDITS (ECTS)
- **ANIMAL EMBRYOLOGY**
5 CRÉDITS (ECTS)
- **ANIMAL CELL PHYSIOLOGY**
5 CRÉDITS (ECTS)
- **BIOCHEMISTRY 2**
5 CRÉDITS (ECTS)

SEMESTER : SPRING

- **CELL BIOLOGY 2**
5 CRÉDITS (ECTS)
- **CELL BIOCHEMISTRY**
5 CRÉDITS (ECTS)
- **MICROBIOLOGY 2**
5 CRÉDITS (ECTS)
- **GENETICS 2**
5 CRÉDITS (ECTS)
- **PHYSIOLOGY OF ANIMAL CELL
COMMUNICATION**
4 CRÉDITS (ECTS)
- **PLANT RESOURCES VALORIZATION**
4 CRÉDITS (ECTS)
- **ORGANIC CHEMISTRY 2**
5 CRÉDITS (ECTS)

***A C1 LEVEL IN FRENCH AND A B2 LEVEL IN ENGLISH ARE REQUESTED TO
FOLLOW THE COURSES BELOW**

BIOLOGY

BACHELOR IN LIFE SCIENCES,
POPULATION AND ORGANISMS
BIOLOGY SPECIALISATION

BILINGUAL TRACK (FRENCH + ENGLISH)

Level : **BACHELOR 2** (LICENCE 2)

SEMESTER : AUTUMN

- **MICROBIOLOGY 1**
5 CRÉDITS (ECTS)
- **BIostatISTICS 1**
5 CRÉDITS (ECTS)
- **PLANT PHYSIOLOGY 1**
5 CRÉDITS (ECTS)
- **GENERAL ECOLOGY**
5 CRÉDITS (ECTS)
- **ANIMAL EMBRYOLOGY**
5 CRÉDITS (ECTS)
- **ANIMAL CELL PHYSIOLOGY**
5 CRÉDITS (ECTS)
- **BIOCHEMISTRY 2**
5 CRÉDITS (ECTS)
- **ORGANIC CHEMISTRY 2**
5 CRÉDITS (ECTS)

SEMESTER : SPRING

- **GENETICS OF POPULATION**
5 CRÉDITS (ECTS)
- **ANIMAL BIOLOGY 2**
5 CRÉDITS (ECTS)
- **PLANT BIOLOGY 2**
5 CRÉDITS (ECTS)
- **MICROBIAL AND ECOSYSTEMIC
ECOLOGY**
5 CRÉDITS (ECTS)
- **ECOPHYSIOLOGY 1 : NUTRITION
FUNCTION**
5 CRÉDITS (ECTS)

***A C1 LEVEL IN FRENCH AND A B2 LEVEL IN ENGLISH ARE REQUESTED TO
FOLLOW THE COURSES BELOW**

BIOLOGY

BACHELOR IN LIFE SCIENCES,
CELL BIOLOGY AND PHYSIOLOGY
SPECIALISATION

**BILINGUAL TRACK (FRENCH +
ENGLISH)**

Level : **BACHELOR 3** (LICENCE 3)

SEMESTER : AUTUMN

- **CELL DYNAMICS**
5 CRÉDITS (ECTS)
- **BIOLOGY OF DEVELOPMENT**
5 CRÉDITS (ECTS)
- **ANIMAL AND PLANT
BIOTECHNOLOGIES**
5 CRÉDITS (ECTS)
- **GENETICS 3**
5 CRÉDITS (ECTS)
- **UNICELLULAR EUKARYOTIC GENETICS**
4 CRÉDITS (ECTS)
- **GENETICS OF BACTERIA**
4 CRÉDITS (ECTS)
- **HOMEOSTASIS AND REGULATION OF
PHYSIOLOGICAL FUNCTIONS**
4 CRÉDITS (ECTS)
- **INTEGRATIVE NEUROPHYSIOLOGY**
4 CRÉDITS (ECTS)
- **PLANT PHYSIOLOGY: PERCEPTION
AND COMMUNICATION FACE TO
ENVIRONMENT**
4 CRÉDITS (ECTS)

SEMESTER : SPRING

- **IMMUNOLOGY**
4 CRÉDITS (ECTS)
- **EXPERIMENTAL STRATEGIES**
4 CRÉDITS (ECTS)
- **INTERNSHIP IN A LAB, OR RESEARCH
PROJECT**
5 CRÉDITS (ECTS)
- **PLANT PHYSIOLOGY: DEVELOPMENT**
4 CRÉDITS (ECTS)
- **PLANT GENOMICS**
4 CRÉDITS (ECTS)
- **PLANT ECOPHYSIOLOGY: STRESS AND
CLIMATIC CHANGES**
4 CRÉDITS (ECTS)
- **SENSORIMOTOR PHYSIOLOGY**
4 CRÉDITS (ECTS)
- **PHYSIOLOGY OF NUTRITION**
4 CRÉDITS (ECTS)
- **ENDOCRINIAN COMMUNICATION**
4 CRÉDITS (ECTS)
- **ANIMAL MODELS**
4 CRÉDITS (ECTS)
- **MOLECULAR AND CELLULAR
MECHANISMS OF ANIMAL
DEVELOPMENT**
4 CRÉDITS (ECTS)
- **ANIMAL CELL PLASTICITY AND
ONTOGENESIS**
4 CRÉDITS (ECTS)

***A C1 LEVEL IN FRENCH AND A B2 LEVEL IN ENGLISH ARE REQUESTED TO
FOLLOW THE COURSES BELOW**

BIOLOGY

BACHELOR IN LIFE SCIENCES,
POPULATION AND ORGANISMS
BIOLOGY SPECIALISATION

BILINGUAL TRACK (FRENCH + ENGLISH)

Level : **BACHELOR 3** (LICENCE 3)

SEMESTER : AUTUMN

- **EVOLUTION GENETICS AND QUANTITATIVE GENETICS**
4 CRÉDITS (ECTS)
- **ORIGIN AND EVOLUTION OF THE BIODIVERSITY**
5 CRÉDITS (ECTS)
- **ECOTOXICOLOGY**
5 CRÉDITS (ECTS)
- **ECOPHYSIOLOGY 2 : RELATIONSHIP FUNCTION**
4 CRÉDITS (ECTS)
- **MARINE FAUNISTIC AND FLORISTIC: INTERTIDAL DOMAIN**
5 CRÉDITS (ECTS)
- **CONTINENTAL FAUNISTIC AND FLORISTIC**
5 CRÉDITS (ECTS)
- **EPISTEMOLOGY AND SCIENCE HISTORY**
5 CRÉDITS (ECTS)

SEMESTER : SPRING

- **ECOLOGY AND BIODIVERSITY**
5 CRÉDITS (ECTS)
- **BIOSTATISTICS 2**
5 CRÉDITS (ECTS)
- **ECOLOGY OF THE POPULATIONS**
5 CRÉDITS (ECTS)
- **MARINE FAUNISTIC AND FLORISTIC: SUBTIDAL DOMAIN**
5 CRÉDITS (ECTS)
- **CONTINENTAL FAUNISTIC AND FLORISTIC**
5 CRÉDITS (ECTS)
- **PLANT ECOPHYSIOLOGY: STRESS AND CLIMATIC CHANGES**
5 CRÉDITS (ECTS)

***A C1 LEVEL IN FRENCH AND A B2 LEVEL IN ENGLISH ARE REQUESTED TO FOLLOW THE COURSES BELOW**

BIOLOGY

BIODIVERSITY ECOLOGY
AND EVOLUTION - FOGEM PARCOURS

Level : **MASTER 2**

SEMESTER : AUTUMN

- **MARINE ECOSYSTEMS FONCTIONNING***
4 CRÉDITS (ECTS)

*THIS COURSE TAKES PLACE IN WIMEREUX