

PART I

PRELIMINARY LEVEL (6 credit courses)

BIOL0011 Preliminary Biology I
BIOL0012 Preliminary Biology II

LEVEL 1

BIOL1017 Cell Biology
BIOL1018 Molecular Biology and Genetics
BIOL1262 Living Organisms I
BIOL1263 Living Organisms II

PART II

LEVEL 2

AGSL2401 Soil and Water Management
BIOL2401 Research skills and practices in Biology
BIOL2402 Fundamentals of Biometry
BIOL2403 Principles of Ecology
BIOL2404 Molecular and Population Genetics
BIOL2406 Eukaryotic Microbiology
BIOL2407 Biological Evolution
BIOL2408 Diving for Scientists (**Summer**)
BOTN2401 Plant Form and Systematics
BOTN2402 Physiology of Plants
ZOOL2402 Animal Physiology
ZOOL2403 Maintenance Systems in Animals
ZOOL2404 Coordination and Control in Animals

LEVEL 3

AGBU3008 Agriculture Internship (4 credits, **Summer**)
AGBU3012 Research Project (4 credits)
AGCP3406 Fruit and Crop Production
AGCP3407 Post-Harvest Technologies
AGSL3001 Irrigation and Drainage Techniques
BIOL3400 Issues in Conservation Biology
BIOL3403 The Biology of Soil
BIOL3404 Principles of Virology
BIOL3405 Pest Ecology and Management
BIOL3406 Freshwater Biology
BIOL3407 Oceanography
BIOL3408 Coastal Ecosystems
BIOL3409 Caribbean Coral Reefs
BIOL3410 Water Pollution Biology
BIOL3411 Research Project (6 credits, 2 Semesters)
BIOL3412 Internship
BIOL3413 Biology Project
BOTN3401 Principles of Plant Biotechnology
BOTN3402 Plant Breeding
BOTN3403 Fundamentals of Horticulture
BOTN3404 Economic Botany
BOTN3405 Plant Eco-Physiology
BOTN3406 Tropical Forest Ecology
ZOOL3403 Entomology
ZOOL3404 Parasitology
ZOOL3405 Vertebrate Biology
ZOOL3406 Immunology
ZOOL3407 Human Biology
ZOOL3408 Sustainable Use of Marine Fishable Resources
ZOOL3409 Aquaculture
ZOOL3410 Advanced Topics in Animal Science

NOTE

All courses carry a 3-credit weighting, unless otherwise specified.

Not all courses are available every year, and certain combinations of courses are limited by timetable constraints.

The noted courses ** will not be offered for the 2014/2015 academic year.



THE UNIVERSITY OF THE WEST INDIES
MONA CAMPUS



DEPARTMENT OF
LIFE SCIENCES

2014-2015

**BSc in
Environmental Biology**

&

**BSc in
Experimental Biology**

REQUIREMENTS FOR THE AWARD OF A DEGREE

In all cases a degree is granted for successful completion of courses such that the student has obtained, at minimum, the following:

Level 1 Compulsory	24 credits
Levels 2 and 3	60 credits
Foundation courses	9 credits
Total	93 credits

Taken from Faculty of Science and Technology (FST) Regulations and Syllabuses.

For more Information:

www.mona.uwi.edu/lifesciences | lifesci@uwimona.edu.jm

927-2753 / 927-1202

BSc IN ENVIRONMENTAL BIOLOGY (2014/15) (63 Advanced Credits)

Programme Objectives

At the end of the programme students will be able to:

- recognise and distinguish between the different habitats associated with Caribbean and Jamaican environments
- identify the range of organisms associated with different environments; their biology and interactions
- identify the association between organisms and the abiotic factors of the environment which affect their survival and distribution, with special emphasis on effects of anthropogenic disturbance
- apply conservation measures to mitigate against the effects of anthropogenic disturbance on marine systems
- apply strategies for the conservation of threatened species and habitats
- outline and evaluate the integrated management frameworks applicable to a range of environments and species
- demonstrate the ability to adequately investigate the organisms, habitats and processes associated with different environments
- analyse, interpret and present the results of their investigations in a range of scientific reporting formats

Programme Outline

The **BSc in Environmental Biology** cannot be taken with any other major or minor because of the number of credits required which are as follows:

Level 1

A minimum of 24 credits from Level I, 18 of which must be FST courses and must include:

BIOL1017	Cell Biology
BIOL1018	Molecular Biology and Genetics
BIOL1262	Living Organisms I
BIOL1263	Living Organisms II

A total of **63** credits from **Part II** which must include:

Level 2 (30 credits)

BIOL2401	Research Skills and Practices in Biology
BIOL2402	Fundamentals of Biometry
BIOL2403	Principles of Ecology
BIOL2404	Molecular and Population Genetics
BIOL2406	Eukaryotic Microbiology
BIOL2407	Biological Evolution
BOTN2401	Plant Form and Systematics
BOTN2402	Physiology of Plants
ZOOL2403	Maintenance Systems in Animals
ZOOL2404	Coordination and Control in Animals

BSc IN ENVIRONMENTAL BIOLOGY (2014/15) Programme Outline continued

Level 3 (33 credits from below)

BIOL3400	Issues in Conservation Biology
BIOL3406	Freshwater Biology
BIOL3407	Oceanography
BIOL3408	Coastal Ecosystems
BIOL3409	Caribbean Coral Reefs
BOTN3405	Plant Eco-Physiology
BOTN3406	Tropical Forest Ecology
ZOOL3408	Sustainable Use of Marine Fishable Resources

EITHER

ZOOL3409	Aquaculture
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OR

ZOOL3403	Entomology
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Plus one (1) other advanced course, and either

BIOL3412	Internship
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OR

BIOL3413	Biology Project
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BSc IN EXPERIMENTAL BIOLOGY (2014/2015) (63 Advanced Credits)

Programme Objectives

The BSc Experimental Biology aims to:

- Expose students to a broad range of laboratory based courses in the discipline with a view to producing a well-rounded graduate.
- Achieve a level of competency in a range of laboratory techniques specific to the biological sciences.
- Develop observational skills to the extent that students are able to independently assess data and draw meaningful conclusions from it.
- Develop the ability to produce coherent scientific reports based on data analysis.
- Encourage the graduate to adopt a scientific approach to problem solving through good experimental design.
- Encourage synthesis of information from a variety of areas within the programme.
- Provide training in the use of a wide range of instrumentation and in measurement of a variety of scientific variables.
- Emphasise transferable skills.
- Test students for their ability to apply acquired knowledge.

Programme Outline

The **BSc in Experimental Biology** cannot be taken with any other major or minor because of the number of credits required which are as follows:

BSc IN EXPERIMENTAL BIOLOGY (2014/15) Programme Outline continued

Level 1

A minimum of 24 credits from Level I, 18 of which must be FST courses, and must include:

BIOL1017	Cell Biology
BIOL1018	Molecular Biology and Genetics
BIOL1262	Living Organisms I
BIOL1263	Living Organisms II

A total of **63** credits from **Part II** which must include:

Level 2

BIOL2401	Research Skills and Practices in Biology
BIOL2402	Fundamentals of Biometry
BIOL2403	Principles of Ecology
BIOL2404	Molecular and Population Genetics
BIOL2406	Eukaryotic Microbiology
BIOL2407	Biological Evolution
BOTN2401	Plant Form and Systematics
BOTN2402	Physiology of Plants
ZOOL2403	Maintenance Systems in Animals
ZOOL2404	Coordination and Control in Animals

Level 3

At least 33 credits of final year courses

Taken from the three groups of courses below with a minimum of 3 credits from any one group, and inclusive of

EITHER

BIOL3413	Biology Project
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OR

BIOL3412	Internship
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GROUP A

BIOL3402	Biology of Fungi**
BIOL3403	The Biology of Soil
BIOL3404	Principles of Virology
BIOL3405	Pest Ecology and Management

GROUP B

BOTN3401	Principles of Plant Biotechnology
BOTN3402	Plant Breeding
BOTN3403	Fundamentals of Horticulture
BOTN3404	Economic Botany
BOTN3405	Plant Eco-Physiology

GROUP C

ZOOL3403	Entomology
ZOOL3404	Parasitology
ZOOL3405	Vertebrate Biology
ZOOL3406	Immunology
ZOOL3407	Human Biology

**Not offered this academic year