

## **BSC. MAJOR IN BIOLOGY**

The BSc. Major in Biology, offered through the Department of Biological & Chemical Sciences, covers the living world, from molecules to ecosystems, building up-to-date knowledge and practical skills in areas that are at the forefront of modern Biology and of relevance to the Caribbean. The flexibility of the programme caters to individual interests and career goals.

Students will:

- Develop an appreciation for and knowledge of the living world.
- Become a creative problem-solver and critical thinker in the laboratory, field and classroom.
- Acquire knowledge and practical skills in areas that are at the forefront of modern Biology and relevant to the Caribbean.
- Develop transferable skills widely applicable to various careers.

Students will need 93 credits approved by the Faculty of Science and Technology. For the Biology Major, 30 credits from Biology, Biochemistry, Ecology and Microbiology (10 courses) are required.

***Students must do these two courses:***

BIOC2371 - Molecular Techniques

BIOL2373 - Skills for Biologists

***And four of these courses:***

BIOC2365 - Primary Metabolism

ECOL2460 - Essentials of Ecology

MICR2260 - Essential Microbiology

BIOL2166 - Advanced Genetics I

BIOL2370 - Flowering Plant Physiology

BIOL2371 - Ecophysiology of Animals

***Also, 4 more courses that you choose from the complete courses list provided below:***

## **MAJOR IN BIOLOGY COURSES:**

### **LEVEL I**

BIOC1015 Introduction to Biochemistry  
BIOL1020 Diversity of Life I  
BIOL1025 Diversity of Life II  
BIOL1030 Introduction to Genetics

### **LEVELS II & III (30 credits)**

#### **BOTH courses (6 credits):**

BIOC2371 Molecular Techniques  
BIOL2373 Skills for Biologists <sup>1, 2</sup>

#### **Two courses (6 credits) from:**

BIOC2365 Primary Metabolism  
ECOL2460 Essentials of Ecology  
MICR2260 Essential Microbiology

#### **Two courses (6 credits) from:**

BIOL2166 Advanced Genetics I  
BIOL2370 Flowering Plant Physiology  
BIOL2371 Ecophysiology of Animals

#### **Six (6) credits from:**

Level II BIOC/BIOL/ECOL/MICR courses  
Level III BIOC/BIOL/ECOL/MICR courses

#### **Six (6) credits from:**

Level III BIOC/BIOL/ECOL/MICR courses

## **BIOLOGICAL SCIENCES ELECTIVE COURSES**

### **Level II Courses:**

BIOC2365 Primary Metabolism  
BIOC2366 Protein Biochemistry  
BIOC2370 Cell Signals  
BIOC2900 Biochemistry Exchange Elective  
BIOL2166 Advanced Genetics I

<sup>1</sup>This course is offered in both semesters but it is recommended that Biology Majors take this course in Semester 2.

<sup>2</sup>Students following this Major who have passed BIOL1010 Basic Skills for Biologists cannot take BIOL2373 Skills for Biologists but must substitute any BIOC/BIOL/ECOL/MICR level 2 or 3 course for the latter.

BIOL2370 Flowering Plant Physiology  
BIOL2371 Ecophysiology of Animals  
BIOL2372 Plants for Caribbean Landscapes  
BIOL2463 Sustainable Land Use  
BIOL2465 Tropical Horticulture  
BIOL2466 Tropical Energy and Bioprocessing  
BIOL2900 Biology Exchange Elective  
ECOL2460 Essentials of Ecology  
ECOL2461 Caribbean Island Biodiversity  
ECOL2462 Marine Biota  
ECOL2900 Ecology Exchange Elective  
MICR2260 Essential Microbiology  
MICR2261 Eukaryotic Microbes  
MICR2262 Methods in Microbiology  
MICR2900 Microbiology Exchange Elective

### **Level III Courses:**

BIOC3260 Principles of Biotechnology  
BIOC3261 Mitochondrial Bioenergetics  
BIOC3370 Basis of Human Disease  
BIOL3901 Multidisciplinary Project  
BIOL3990 Biology Project  
BIOC3265 Principles of Bioinformatics  
BIOL3025 Molecular Plant Pathology  
ECOL3100 Statistics for Ecologists  
ECOL3460 Biology & Ecology of Coral Reefs  
ECOL3461 Ecology of a Changing Planet  
ECOL3462 Behaviour: An Evolutionary Approach  
ECOL3463 Tropical Crop Ecology  
MICR3265 Microbiology of Food  
MICR3266 Ecology of Microorganisms  
MICR3267 Essential Virology  
MICR3268 Microbial Pathogenesis

## **MINOR IN BIOLOGY (Fifteen (15) Credits):**

BIOC2371 Molecular Techniques\*

**AND**

BIOL2370 Flowering Plant Physiology

**OR**

BIOL2371 Ecophysiology of animals

**AND Three 3-credit courses (9 credits) from**

**Biological Sciences Elective Courses:**

Level II BIOC/BIOL/ECOL/MICR courses

Level III BIOC/BIOL/ECOL/MICR courses

\*BIOC2371 Molecular Techniques must be replaced in the BIOL Minor by any BIOC/BIOL/ECOL/MICR 3-credit, level 2 or 3 course when the BIOL Minor is combined with a BIOC, ECOL or MICR Major.

***Typical careers related to this field of study include:***

- Quality Assurance Officer
- Environmental Officer
- Science Teacher
- Biosafety Officer
- Health Care Sales Representative
- Horticulturist
- Research Scientist

Students can then continue on to postgraduate programmes in Bioinformatics, Biotechnology, Fisheries, Food Science, Forensics, Plant Pathology, and other areas of applied Biology.

For further details about the Biology programme, contact Professor Sean Carrington (Biology Coordinator) via email at [sean.carrington@cavehill.uwi.edu](mailto:sean.carrington@cavehill.uwi.edu), or via telephone at (246) 417-4323.