

# BIOLOGICAL SCIENCE DEPARTMENT

## COURSE CONTENT SPECIFICATIONS/SYLLABUS OF ALL COURSES IN THE PROGRAMME/SUB-DISCIPLINE:

### 100-LEVEL

<b>1<sup>st</sup> Semester</b>		<b>Units</b>	<b>Pre-requisite</b>
BIO101	Intro. Biology I (Cell & Organizational Biology)	4	-
CHM 101	Foundation Chemistry 1	4	-
MTH 111	Elementary Algebra 1	3	-
MTH 112	Elementary Calculus	3	-
PHY190	Physics for Life Sciences 1	4	-
GNS 101	Use of English I	2	-
		<b>20</b>	

### 2<sup>nd</sup> Semester

B10102	Intro. Biology II (Biosystematics & Structure)	4	-
BIO103	Intro. Biology III (Heredity, Ecology & Dev.)	3	-
CHM102	Foundation Chemistry II	5	-
PHY191	Physics for Life Sciences II	4	-
GNS102	Use of English II	2	-
		<b>18</b>	

### 200-LEVEL

#### 1<sup>st</sup> Semester

B10201	Genetics & Evolution	3	B10101
ECO201	Principles of Ecology	3* (Non MCB)-	
CHM 201	Intro. Chemistry	5	-
BCH 201	Metabolism & Chemicals of Life	3	-
MCB20I	General Microbiology 1	3	-
GNS 201	Information Science 2		
CHM24I	Physical Chemistry I (MCB only)	4*	CHM20I
		<u>19(20 for MCB)</u>	

#### 2<sup>nd</sup> Semester

B10 202	Quantitative Methods in Biology 1	3	-
B10203	Cell Biology	3	B10101, BIO20I,
ECO202	The Environ. & World's Ecosystem (Non-MCB)	3*	ECO20I, BCH20I
BOT20I	Review of Plant Kingdom	4	B10102
ZOO20I	Review of Animal Kingdom	4	B10102
CHM231	Organic Chemistry I	3	CFIM20I
GNS202	African History & Culture	2	-
CHM221	Inorganic Chemistry I (MCB only)	3*	-
		<b>22</b>	

\*Courses not common to all options.

## 300-LEVEL

### BOTANY

#### 1<sup>st</sup> Semester

		<b>Units</b>	<b>Pre-requisites</b>
BIO301	Biostatistics & Introd. Computer	3	ECO201, ECO202
BOT305	Plant Anatomy	3	BOT201
BOT301	Mycology	3	MCB201, BOT201
BIO301	Quantitative Methods in Biology II	3	BIO202
GNS301	Science, Technology & Society	2	-
Any other course from electives		3	-
		<b>17</b>	

#### 2<sup>nd</sup> Semester

		<b>Units</b>	<b>Pre-requisites</b>
BOT302	Systematic of flowing plants	3	BOT201
BOT304	Plant Physiology	3	BOT201, BCH201
BIO302	Histology	3	BOT201, ZOO201
BOT303	Algology	3	BOT201, MCB201
Any other courses from electives		6	
		<b>18</b>	

#### Electives

ECO303	Environment Pollution	3	MCB201
BTO307	Histological and Histochemical Tech.	3	BOT201, BOT302
BOT306	Principle of Plant Breeding	3	ECO201, ECO202
ECO304	Reclamation of Derelict Land	3	-
ECO302	Physiological Ecology	3	-
		<b>15</b>	

### MICROBIOLOGY

#### 1<sup>st</sup> Semester

		<b>Units</b>	<b>Pre-requisites</b>
BIO306	Microbial Genetics	3	-
MCB 301	Bacteriology	3	MCB201
MCB302	Virology	3	MCB201
BIO301	Quantitative Methods in BIO.II	3	BCH202
GNS301	Science, Technology & Society	2	-
Any other courses from electives		6	
		<b>20</b>	

#### 2<sup>nd</sup> Semester

		<b>Units</b>	<b>Pre-requisites</b>
MCB303	Industrial Microbiology	3	-
MCB306	Immunology	3	-
MCB305	Microbial Physiology	3	-
ZOO304	Medical & Vet. Entomology	3	ZOO201
MCB304	Medical Microbiology	3	-
ZOO303	Parasitic Protozoan	3	-
Any other courses from electives		6	-
		<b>21</b>	

<b>Electives</b>		<b>Units</b>	<b>Pre-requisites</b>
BIO307	Biological Techniques	2	-
ZOO301	Animal Physiology	3	ZOO20I
ZOO302	Introductory Parasitology	3	-
BOT301	Mycology	3	MCB20I
BCFI301	Enzymology	3	BCH20I, BOT20I
BCH302	General Biochemical Methods	3	BCH20I
BIO301	Histology	3	-
ZOO307	Insect and Hygiene	3	-
		<b>23</b>	

## **ZOOLOGY**

### **1<sup>st</sup> Semester**

		<b>Units</b>	<b>Pre-requisites</b>
ZOO301	Animal Physiology	3	ZOO201
ZOO305	Entomology	3	ZOO201
ZOO302	Introductory Parasitology	3	-
BIO304	Human Genetics	3	BIO201
BIO301	Quantitative Methods in Bio.II	3	BIO202
GNS301	Science, Technology & Society	2	-
Any other courses from electives		6	-

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### **2<sup>nd</sup> Semester**

		<b>Units</b>	<b>Pre-requisites</b>
ZOO303	Parasitic Protozoans	3	-
ZOO304	Medical and Vet.Entomology	3	ZOO201
BIO302	Histology	3	-
BIO307	Histological &Histochem.Tech.	3	-
BIO305	Fisheries & Aquaculture	3	-
Any other course from Elective		3	-

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### **Electives**

		<b>Units</b>	<b>Pre-requisites</b>
ECO303	Environmental Pollution	3	-
ZOO 306	Principles of Pest Management	3	ZOO201
ZOO 307	Insects & Diseases	3	-
MCB 301	Bacteriology	3	MCB201
BIO303	Comparative Vertebrate Anatomy	3	ZOO201
MCB306	Immunology	3	-

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## 500 - LEVEL

### **BOTANY**

#### **1<sup>st</sup> Semester**

	<b>Units</b>	<b>Pre-requisites</b>
BIO502 Project	3	-
BI0504 Cytogenetics	3	ECO201
BI0506 Molecular Genetics	3	BIO201, BCH201
BOT507 Economic Botany	3	
Any other course from Electives	6	
	<b>18</b>	

#### **2<sup>nd</sup> Semester**

	<b>Units</b>	<b>Pre-requisites</b>
BIO502 Project	3	ECO201, BOT201
BOT511 Plant Anatomy and Physiology	3	
BOT502 Weed Biology & Ecology	3	
DOT509 Soil Science	3	
HOT504 Medicinal Properties of Native Plants	3	
Any other course from Electives	3	
	<b>18</b>	

#### **Electives**

	<b>Units</b>	<b>Pre-requisites</b>
BIO507 Hydrobiology	3	-
BOT508 Plant Reproduction	3	-
DOT506 Plant Tissue Culture	3	-
RIO503 Environ. Modelling	3	ECO201
BOT504 Medicinal Properties of Native Plants	3	-
BOT510 Pasture & Forage Management	3	-
ECO502 Population Processes	3	-
ECO505 Environ. Conservation	3	-
BOT503 Nigerian Vegetation	2	-
	<b>26</b>	

### **MICROBIOLOGY**

#### **1<sup>st</sup> Semester**

	<b>Units</b>	<b>Pre-requisites</b>
BIO502 Project	3	-
MCB502 Soil Microbiology	3	MCB201, ECO202
MCD505 Seminar in Microbiology	3	-
MCD506 Pharmaceutical Microbiology	3	BCH201, MCB305
ZOO501 Parasitic Helminthes	3	ZOO201
Any other courses from Electives	3	
	<b>19</b>	

#### **2<sup>nd</sup> Semester**

	<b>Units</b>	<b>Pre-requisites</b>
BIO502 Project	3	-
MCD501 Food Microbiology	3	-
MCD503 Environ. Microbiology	3	-

MCD507	Analytical Microbiology & Quality Control 2		MCB201, BCH201
	Any other course from Electives	6	
		<b>17</b>	

<b>Electives</b>		<b>Units</b>	<b>Pre-requisites</b>
MCB504	Immunity & Hypersensitivity	3	-
MCD505	Principles of Public Health	3	MCB201
ECO503	Microbial Ecology	3	BCH301
BCH501	Advanced Euzymology	2	BCH302
BCH502	Advanced Biochemical Methods	2	-
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## **ZOOLOGY**

<b>1<sup>st</sup> Semester</b>		<b>Units</b>	<b>Pre-requisites</b>
BIO502	Project	3	-
ECO502	Population Processes	3	-
ZOO501	Parasitic 1-lelminthes	3	ECO201
	Any other course from Electives	2	
		<b>18</b>	

<b>2<sup>nd</sup> Semester</b>		<b>Units</b>	<b>Pie-requisites</b>
BIO502	Project	3	-
ECO505	Environ. Conservation	3	ECO201, ECO202
	Any other courses from electives	12	
		<b>18</b>	

<b>Electives</b>		<b>Units</b>	<b>Pre-requisites</b>
BIO506	Conservation Molecular Genetics	3	BIO201,BCH201
BIO508	Introductory Embryology	3	-
ECO506	Wildlife Ecology & Conservation	3	-
BIO507	Hydrobiology	3	-
BIO503	Environmental Modelling	3	ECO201
BIO505	Advanced Cytogenetics	3	-
ZOO502	Nigerian Animals	3	B1020 I
ZOO503	Reproductive Biology	3	ZOO301
ZOO504	Animal Nutrition	3	BCH20I,ZOO301
ZOO505	Apiculture	3	ZOO306
ZOO506	Systematic Entomology	3	-
ZOO507	Evolution of Chordates	3	-
ZOO508	Comparative Invertebrate Anatomy	3	-
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