

**Table 4: Courses to be taken by 100 Level students in the
Department of Biological Sciences and Biotechnology**

S/N	Course Code	Course Title	Course Status	Total Units
1st Semester 100 Level				
1	GNS 101	Use of English I	C	2
2	GNS 103	People, Culture and Social Issues	C	2
3	BIO 101	Organisms and Environment	C	3
4	BIO 191	Practical Biology I	C	1
5	ZAQ 101	Diversity of animal life	C	2
6	PSB 101	Diversity of plant life	C	2
7	CHE 101	Physical Chemistry	R	3
8	CHE 103	Organic Chemistry	R	3
9	CHE 191	Practical Chemistry I	R	1
10	MAT 105	Elementary Mathematics for biology students I	R	2
11	PHY 105	Physics for biology students I	R	2
12	PHY 191	Practical Physics I	R	1
		Total Units		24
2nd Semester 100 Level				
18	GNS 102	Use of English II	C	2
19	GNS 104	Basic Computer Applications	C	2
13	BIO 102	Principles of Biology	C	3
14	BIO 192	Practical Biology II	C	1
15	ZAQ 102	The mammalian body	C	2
16	CHE 102	Inorganic Chemistry	R	3
17	CHE 192	Practical Chemistry II	R	1
20	MAT 106	Elementary Mathematics for biology students II	R	2
21	PHY 106	Physics for biologists II	R	2
22	PHY 192	Practical Physics II	R	1
23	PSB 102	Flowering Plants	R	2
		Total Units		21

**Table 5: Courses at 200 to 400 level for students of
Microbiology and Industrial Biotechnology**

Course Code	Course Title	Course Status	Pre requisite	Total Units
1st Semester 200 Level				
BIO 201	Introduction to Cell Biology & Genetics	C	BIO 102	2
BIO 203	Biological techniques I	C	-	2
BIO 205	Introductory Biotechnology	C	-	2
ZAQ 201	Invertebrate Zoology	R	-	2
ZAQ 203	Introductory Animal Physiology	C	ZAQ 102	2
PSB 201	Plant Morphology	R	PSB 102	2
PSB 203	Introduction to Plant Anatomy	C	-	2
MIC 201	Introduction to Microbiology	C	-	2
GNS 201	History and Philosophy of Science	C	-	2
GNS 203	Introduction to French I	C	-	2
BCH 201	General Biochemistry I	R	BIO 101, CHE 103	3
	Total			23
2nd Semester 200 Level				
BIO 204	Biological techniques II	C	-	2
BIO 202	Introductory Ecology	C	-	2
MIC 203	Microbiological Techniques I	C	-	2
ZAQ 202	Chordate Zoology	R	ZAQ 102	2
PSB 202	Whole Plant Physiology	R	PSB 101	2
PSB 204	Introduction to Ethnobotany	R	-	2
GNS 108	Philosophy and Logic	C	-	2
GNS 204	Introduction to French II	C	-	2
CHE 214	General Chemistry for the Life Sciences II	R	CHE 101	2
BCH 202	General Biochemistry	R	BCH 201	3
STA 202	Statistics for Biological Sciences	C	-	2
CHE 296	Practical Chemistry for Life Sciences	R		1

Course Code	Course Title	Course Status	Pre requisite	Total Units
	Total Units			24
1ST Semester 300 Level				
MIC 303	Microbial Biotechnology	C		2
MIC 301	Immunology and Immunochemistry	C		2
MIC 305	Pharmaceutical Microbiology	C	MIC 201	2
MIC 307	Bacteriology	C	MIC 201	2
ZAQ 301	Proto-zoology	R	-	2
MIC 309	Agricultural and Soil Microbiology	C	-	2
MIC 311	Introductory Virology	C	-	2
GNS 301	Entrepreneurial Skill I	C	-	2
MIC 313	Microbial metabolism of Carbohydrates, lipids and proteins	R	BCH 202	3
PSB 311	Mycology	R	-	2
ZAQ 311	Helminthology	R	-	2
	Total units			23
2nd Semester 300 Level				
GNS 302	Entrepreneurial Skill II	C	-	2
MIC 300	Industrial Training (SIWES)	C	-	6
MIC 314	Essay in Microbiology	C	-	2
MIC 316	Seminar	C		2
	Total units			12
1st Semester 400 Level				
BIO 401	Genetics and Molecular Biology	R	BIO 301	3
MIC 403	Microbiology techniques II	C	-	2
MIC 401	Environmental Microbiology	C	MIC 309	2
MIC 417	Medical and Pathogenic Microbiology	C	-	2
MIC 405	Virology Techniques & Tissue Culture	C	MIC 311	2
MIC 407	Microbiological Quality Control	C	-	2
MIC 419	Microbial Genetics	R	-	2

Course Code	Course Title	Course Status	Pre requisite	Total Units
MIC 411	Industrial Biotechnology	R	-	2
MIC 413	Food Microbiology	R	-	2
MIC 415	Research Methods	R	-	1
	Total units			20
2nd Semester 400 Level				
MIC 404	Microbiology Techniques II	C		2
MIC 402	Petroleum Microbiology	C	-	1
MIC 418	Medical Mycology	C	-	1
MIC 406	Fermentation Technology	C	MIC 313	2
MIC 408	Brewery Technology	C	MIC 313	1
MIC 410	Dairy Science and Technology	C	MIC 313	1
MIC 412	Microbial Physiology and Metabolism	R	MIC 313	2
MIC 498	Research Project	C	-	6
PAS 302	Environmental Impact Assessment	R	-	2
MIC 414	Scientific Writing and Presentation	R	-	1
	Total units			19

**Table 6: Courses at 200 to 400 level for students of
Plant Science and Biotechnology Honours Degree Programme**

Course Code	Course Title	Course Status	Pre requisite	Total Units
1st Semester 200 Level				
BIO 201	Introduction to Cell Biology & Genetics	C	BIO 102	2
BIO 203	Biological Techniques I	C	-	2
BIO 205	Introduction to Biotechnology	C	-	2
ZAQ 201	Invertebrate Zoology	R	-	2
ZAQ 203	Introductory Animal Physiology	C	ZAQ 102	2
PSB 201	Plant Morphology	R	PSB 102	2

Course Code	Course Title	Course Status	Pre requisite	Total Units
PSB 203	Introduction to Plant Anatomy	C	-	2
MIC 201	Introduction to Microbiology	C	-	2
GNS 201	History and Philosophy of Science	C	-	2
GNS 203	Introduction to French I	C	-	2
BCH 201	General Biochemistry I	R	BIO 101 CHE 103	2
CHE 213	General Chemistry for Life Sciences I	R		2
	Total Units			24
2nd Semester 200 Level				
BIO 202	Introductory Ecology	C	-	2
ZAQ 202	Chordate Zoology	R	ZAQ 102	2
PSB 202	Whole Plant Physiology	R	PSB 101	2
PSB 204	Introduction to Ethnobotany	R	-	2
GNS 108	Philosophy and Logic	C	-	2
GNS 204	Introduction to French II	C	-	2
MIC 202	Basic Techniques in Microbiology	C	-	2
CHE 214	General Chemistry for the Life Sciences II	R	CHE 101	2
BCH 202	General Biochemistry	R	BCH 201	2
STA 202	Statistics for Biological Sciences	C	-	2
BIO 204	Biological techniques II	C	-	2
CHE 296	Practical Chemistry for Life Sciences	R		1
	Total Units			23
1st Semester 300 Level				
BIO 303	Biological techniques III	C	-	2
BIO 301	Genetic Variability and Evolution	C	BIO 201	2
BIO 305	Field Course	C	BIO 202	1
PSB 301	Taxonomy of Angiosperm	C	PSB 201	1
PSB 303	Physiological Plant Ecology	C	PSB 203	2
PSB 305	Plant Breeding	R	BIO 201	2
PSB 307	Introductory Horticulture	R	-	2

Course Code	Course Title	Course Status	Pre requisite	Total Units
PSB 309	Plant Biotechnology	C	-	2
GNS 301	Entrepreneurial Skill I	C	-	2
PSB 311	Mycology	R	-	2
PSB 313	Plant Metabolism	R	-	2
	Total Units			20
	Second Semester			
PSB 312	Industrial Attachment	C	-	6
GNS 302	Entrepreneurial Skill II	R	-	2
PSB 398	Topics in Plant Science (Seminar)	R	-	2
	Total Units			10**
1st Semester 400 Level				
BIO 401	Genetics in Molecular Biology	R	BIO 301	3
PSB 401	Advanced Plant Anatomy	C	-	2
PSB 403	Weed Biology and Control	C	PSB 303	2
PSB 405	Molecular Approaches to Plant Systematics	C	-	1
PSB 407	Plant Molecular Physiology	C	PSB 2-2	1
PSB 409	Soil Ecology	C	-	2
PSB 417	Pesticides, Agrochemicals and Environment	R	-	1
PSB 413	Systematics of Non-flowering Plants	C	BIO 302	2
BIO 411	General Ecology	R	BIO 202	2
BIO 413	Quantitative Biology	R	STA 202	2
PSB 415	Introduction to Plant Diseases	R	-	2
	Total Units			22
	2nd Semester 400 Level			
PSB 402	Advanced Ethnobotany	R	PSB 204	2
PSB 404	Physiology of Plant Growth and Yield	R	PSB 202 PSB 303	2
PSB 406	Plant Diseases Development, Epidemiology and Control	R	-	2
PSB 408	Floriculture and Landscape Planning	R	PSB 307	2

Course Code	Course Title	Course Status	Pre requisite	Total Units
PSB 410	Vegetation Ecology	R	PSB 411	2
BIO 402	Biogeography	R		2
BIO 404	Environmental Biology	R	-	2
PSB 498	Projects in Plant Science and Biotechnology	C	-	6
	Total Units			20

Table 7: Courses at 200 to 400 level for students of Zoology and Aquaculture

Course Code	Course Title	Course Status	Pre requisite	Total Units
1st Semester 200 Level				
BIO 201	Introduction to Cell Biology & Genetics	C	BIO 102	2
BIO 203	Biological Techniques I	C	-	2
BIO 205	Introductory Biotechnology	C	-	2
ZAQ 201	Invertebrate Zoology	R	-	2
ZAQ 203	Introductory Animal Physiology	C	ZAQ 102	2
PSB 201	Plant Morphology	R	PSB 102	2
PSB 203	Introduction to Plant Anatomy	C	-	2
MIC 201	Introduction to Microbiology	C	-	2
GNS 201	History and Philosophy of Science	C	-	2
GNS 203	Introduction to French I	C	-	2
BCH 201	General Biochemistry I	R	BIO 101 CHE 103	3
	Totals units			23
2nd Semester 200 Level				
BIO 204	Biological techniques II	C	-	2
BIO 202	Introductory Ecology	C	-	2

Course Code	Course Title	Course Status	Pre requisite	Total Units
ZAQ 202	Chordate Zoology	R	ZAQ 102	2
PSB 202	Whole Plant Physiology	R	PSB 101	2
PSB 204	Introduction to Ethnobotany	R	-	2
GNS 108	Philosophy and Logic	C	-	2
GNS 204	Introduction to French II	C	-	2
CHE 214	General Chemistry for the Life Sciences II	R	CHE 101	2
CHE 296	Practical Chemistry for Life Sciences	R		1
BCH 202	General Biochemistry	R	BCH 201	3
STA 202	Statistics for Biological Sciences	C	-	2
	Total units			22
1st Semester 300 Level				
BIO 301	Genetic Variability and Evolution	R	BIO 201	2
BIO 303	Field Course I	C	BIO 202	1
ZAQ 301	Proto-zoology	R	ZAQ 201	2
ZAQ 303	Arthropod Diversity	R	-	2
ZAQ 305	Animal Development	R	-	2
ZAQ 307	Introduction to Aquaculture	C	-	2
GNS 301	Entrepreneurial Skill I	C	-	2
ZAQ 311	Helminthology	E		2
ZAQ 313	Histology	E		2
ZAQ 315	Vertebrate Zoology	R		3
ZAQ 317	Animal Biotechnology	R		2
ZAQ 391	Zoological Techniques I	C	-	2
	Total Units			24
2nd Semester 300 Level				
GNS 302	Entrepreneurial Skill II	C	-	2
ZAQ 312	Special Topics in Zoology and Aquaculture (Term Papers)	C	-	2
ZAQ 318	Industrial Training (SIWES)	C	-	6

Course Code	Course Title	Course Status	Pre requisite	Total Units
ZAQ 398	Essay	C		2
	Total units			12
1st Semester 400 Level				
BIO 401	Genetics in Molecular Biology	R	BIO 301	3
ZAQ 409	Impact of Biology on Society	R	-	2
BIO 405	Field Course II	R	BIO 303	2
ZAQ 401	Hydrobiology	R	ZAQ 307	2
ZAQ 403	Fisheries Biology and Nutrition	R	-	2
ZAQ 405	Wildlife and Conservation	R	-	2
BIO 411	General Ecology	R	BIO 202	3
ZAQ 415	Animal Products	E	-	2
ZAQ 417	Topics in Animal Physiology	E	-	2
BIO 413	Quantitative Biology	E	STA 202	2
4 units of electives are recommended				
Total units (based on 4 units of electives)				20
Second Semester				
2nd Semester 400 Level				
BIO 402	Biogeography	R	-	2
BIO 404	Environmental Biology	R	PAS 301	3
ZAQ 402	Integrated Pest Management	R	-	2
ZAQ 404	Fish Culture Systems Designs and Mgt	R	ZAQ 306	3
ZAQ 406	Fish Processing and Marketing	R	-	2
ZAQ 408	Animal Products	R	-	2
ZAQ 410	Environmental Impact Assessment	E	-	2
ZAQ 412	Fishing Gear Technology	E	-	2
ZAQ 414	Fisheries Economics	E	-	2
ZAQ 498	Project	C	-	6
Total units (based on 2 units of electives)				22