



# BIOLOGICAL SCIENCES

AT

**BAYERO UNIVERSITY,**  
**KANO- NIGERIA**

**A HANDBOOK FOR**  
**B.Sc. ZOOLOGY STUDENTS**

*Published by*

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**Faculty of Life Sciences,**  
**College of Natural and Pharmaceutical Sciences,**  
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## THE UNIVERSITY CREST



### The Crescent and the Star

**The Crescent: Jami'atu Bayero Kano  
(i.e. Symbol & Unit of Time)**

**The Star: Motto: “Wa Fawqa Kulli Dhi Ilmin Alim”  
(i.e. Guiding Light) i.e. “.....But Over All Endowed with  
Knowledge is One, the All  
Knowing”**

**The University Colour: [Blue](#)**

### **Welcome Address by H.O.D.**

Dear Students,

It is with great pleasure and excitement that I welcome you to the Department of Biological Sciences as you embark on your journey in the field of Zoology.

As the Head of this prestigious Department, I am happy to see new faces joining our community and returning students continuing their academic journey with us and assure you that you are know an integral part of our vibrant and dynamic community. Zoology is a field that encompasses the study of the diversity of animal life from microscopic to the majestic and as well offers endless opportunities for exploration and discovery.

In the course of your program here, you will delve into the intricacies of animal biology, behaviour, ecology and conservation. You will be engaged in hands-on research, fieldwork and experimental learning that will deepen your understanding of the natural world which will prepare you for a variety of careers and further academic pursuits.

I encourage you to embrace the challenges and opportunities that lie ahead with enthusiasm and dedication. Also, take advantage of the wealth of resources available to you.

I am confident that each and every one of you has the potential to make a positive impact through your studies and future endeavours. Together, let us embark on this journey of exploration, discovery and conservation.

Once again, welcome to the Zoology program, I look forward to witnessing your growth and success in the years to come.

Thank you.

Prof. Nuradeen Abdullahi  
Head of Department  
Department of Biological Sciences

## **PREFACE**

Dear Students

Welcome to the Department of Biological Sciences, Bayero University, Kano. We encourage you to avail yourself of the many resources that both the Department and the University have to offer you. The Department and Student Affairs Division offer Career Guidance, Counseling and also assist student in collaboration with Biological Sciences Students' Association (BIOSSA) in organizing social events such as Annual BIOSSA Week etc. Biological Sciences Department prides itself on its student-centered approach and open door policy.

The student Handbook is a comprehensive guide to help you understand our Mission, Policies, Procedures, Rules and Regulations (in addition to the University General Admission and Examinations Regulation Handbook). The Department offers Students freedom to make choices yet with choice come responsibilities. We believe that students have the obligation as members of the Zoology community to internalize and fully understand all of our rules and policies and also the consequences of breaking these rules. The Department holds Students Responsible for their Actions!

Questions relating to your academic affairs can be answered by Level Coordinators, we therefore urge you to take advantage of all the enabling policies of the Department so as to prepare for a Better Future Ahead!

Please be rest assured that we are all committed to helping you have a successful study.

### **Tips for New Students**

- ✓ Upon completion of your University and Departmental Registration, go to the students' Affairs Division; submit your passport-sized photograph and other details for your student identity card. This helps you to avail yourself of the University and Department's privileges.
- ✓ Find out the name and office of your Level Coordinator.
- ✓ Keep a close watch on your personal belongings.
- ✓ Be aware and current about the Academic Calendar
- ✓ Join clubs, and sports team. All information related to student extracurricular activities is available through the Departmental Students Association (BIOSSA) and the University Students Union Association (SUG).
- ✓ Attend all workshops relating to career development to begin planning your path to a successful career.
- ✓ Be aware of what is happening in the Department and the University through various notice boards around the campus, academic and events calendar through the Departmental and University website.
- ✓ Attend all departmental orientation workshops. These are held at the beginning of each new academic session.
- ✓ Students are advised to submit their registration documents to avoid attracting penalty.
- ✓ Every student must understand all information in this booklet and take into account the Rules and Regulations that must be followed in all cases within the Department and the University community.
- ✓ Every student, even if he/she is not aware of these rules will not be exempted from liability in the event of any violation. However, Level Coordinators, members of the Department, and staff of Students Affairs Division can guide student when involved in any problem or in need of more information/clarification on University Rules and Regulations.

### **Vision, Mission and Core Values**

#### **Vision**

Biological Sciences Department aspires to be a distinguished leading department that provides quality education and state of the art research. We aim at preparing unique graduates that are able to meet labour market demands and provide significant contribution to the community development in a progressively complex world

#### **Mission**

Biological Sciences Department provides excellent teaching, research and community service. We prepare well educated and motivated graduates who are able to serve their community and contribute to the enhancement of society by:

- ✓ Establishing innovative educational programs that meet the needs of students and society.
- ✓ Providing a supportive learning environment that fosters integrity, creativity and self development.
- ✓ Continuously provides new developments in classroom design and equipment.

- ✓ Ensuring that our practices, policies and procedures encourage sustainable development.
- ✓ Conducting creative research in cooperation with national, regional and international organizations.

### **Core Values**

Biological Sciences Department adopts the following core values as main pillars for all practices among its students, academic and non-teaching staff.

- ✓ Integrity
- ✓ Honesty
- ✓ Respect
- ✓ Fairness
- ✓ Credibility
- ✓ Transparency
- ✓ Accountability

### **Academic Regulations**

#### **Registration**

- ✓ With the beginning of each session, the student registers in the courses chosen by him/her in consultation with his/her Level Coordinator on the Course Registration Form (CRF).
- ✓ The Faculty (i.e. Faculty of Life Sciences) and the Department determines the minimum number of courses to be registered by each student.

#### **Add and Drop**

- ✓ The student has the right to drop or add a course (s) after finishing all the procedures of the registration and this can be done with the guidance of the Level Coordinator and within the University's add and drop period.

#### **Probation**

- ✓ A student is under probation if he/she fails to obtain a Cumulative Grade Point Average (CGPA) of 1.00.
- ✓ It is a warning served to the affected student to improve his/her academic performance to avoid withdrawal if he/she could not obtain CGPA of 1.00 or above in the subsequent session.

#### **a. Withdrawal from Program**

**Involuntary Withdrawal:** Withdrawal from any of the programs in the Department shall be recommended by the Faculty Board of Examiners to the Senate on any of the following:

- i. Failure to attend classes and examinations for a complete semester without valid reasons.
- ii. Failure to get a CGPA of 1.00 or better during a probationary session.
- iii. A failure rate so great that at the point of consideration, and even by registering for the maximum permissible number of credits in all available semesters, a student cannot graduate within the maximum permissible period of study.

**Voluntary Withdrawal:** A student may voluntarily withdraw from the program by applying to the Faculty Board of Examiners through the Dean, stating the reason(s) for the withdrawal. If the Faculty Board accepts the application, it would be make the appropriate recommendation to the Senate.

- b. **Suspension of Studies:** All students are entitled for suspension of studies. When the need arises, a student is expected to write an application to the Dean (which should endorsed by his/her level coordinator and the Head of Department) stating clearly the reason(s) for the suspension. The application is to be submitted before the consideration of the semester results by the Faculty Board of Examiners (i.e. not later than four (4) weeks after the completion of the semester examinations). if the application is approved by the Board, a recommendation to the effect would be made to the Senate for final approval.

#### **Attendance Requirements**

- ✓ Lectures, seminars, tutorials and practical attendance are integral part of the university study process; students are therefore encouraged to follow regular and punctual attendance in all their courses.
- ✓ Students must obtain 70% attendance in all components mentioned above to qualify to sit for an examination.

#### **Coordination**

Academic coordination is a task focused on offering constructive counseling and guidance to students in order to assist them in meeting their academic goals.

#### **Level Coordinator**

- ✓ Level coordinators are academic staff assigned to take charge of student's coordination at respective levels from year one to graduation.
- ✓ They are members of the Departmental Board.
- ✓ Keeping students academic records.
- ✓ Clarify policies and procedures to students.
- ✓ Helps students in addressing an academic problem.
- ✓ They provide students with accurate information with regards to their academic programs.
- ✓ Listen to student's problems and concerns.
- ✓ Make referrals for other services.

#### **Students Roles**

- ✓ Share information.
- ✓ Seek help before a situation escalates in to crisis.
- ✓ Know how academic action affects your status.
- ✓ Interaction with level coordinators.
- ✓ Know and complete program requirements.
- ✓ Ask questions and always follow up.
- ✓ Explore options.
- ✓ Timely submission of registration forms, assignments, review essays/projects, SIWES and field trip reports.



### **Violations of Academic Integrity**

- ✓ Cheating in an academic environment is the act of copying from the work of another student, using notes or other materials and any form of communication during assessments (tests and examinations).
- ✓ Plagiarism involves direct copying of somebody's work/report and presenting it as one's own.
- ✓ Disruption of classroom activity occurs when any action or behavior is reasonably judged by the instructor, laboratory assistant or teaching assistant to be detrimental to the class.
- ✓ Other violations may also include:
  - Intentionally destroying University property.
  - Distributing bulletins, papers, indiscriminate pasting of posters and collecting student signatures without prior consent from the university official channels.
  - Participating in students strikes inside the university premises or volunteering in illegal marches.

### **Entry Requirements**

i) For entry into 100 level, Unified Tertiary Matriculation Examination (UTME), with five (5) SSCE/NECO/GCE O'Level credits obtained in not more than two (2) sittings. The required credits are in Physics, Chemistry, and Biology, including English and Mathematics.

ii) For Direct Entry into 200 level:

A) Minimum of 10 IJMB points with Five (5) O/Level passes in relevant subjects, three of which must be at Credit level.

B) OND at Upper Credit and five (5) O'Level passes, three of which must be at credit level.

### **Course(s) Assessment**

The courses are assessed as follows:

i) Courses with Practical Components: Continuous Assessment work (Tests, Quiz, Assignment, etc.) (20%), Practicals (20%) and Examinations (60%)

ii) Courses without Practical components: Continuous Assessment (40%) and Examinations (60%).

### Course Code and Title for B.Sc. Zoology Courses

#### LEVEL 100

#### First Semester

Course	Title	Credit
BIO 1201	General Biology I	2
BIO 1203	General Biology III	2
CHM 1231	Inorganic Chemistry	2
CHM 1241	Organic Chemistry	2
GSP 1201	Use of English	2
MTH 1301	Elementary Mathematics I	3
PHY 1170	Practical Physics	1
PHY 1210	Mechanics	2
PHY 1220	Electricity & Magnetism	2
	Total	18

#### Electives

Course	Title	Credit
GEO 1305	Map Analysis	3
GEO 1307	Field Studies	3
STA 1311	Probability	3

#### Second Semester

Course	Title	Credit
BIO 1202	General Biology II	2
BIO 1204	General Biology IV	2
CHM 1251	Physical Chemistry	2
CHM 1261	Practical Chemistry	2
GSP 1202	Use of Library, Study Skills & ICT	2
MTH 1303	Elementary Mathematics III	3
PHY 1180	Practical Physics	1
PHY 1230	Behaviour of Matter	2
	Total	16

#### Electives

Course	Title	Credit
GEO 1203	Introductory Physical Geography	2
MTH 1302	Elementary Mathematics II	3

**TOTAL - 34 CREDITS**

#### LEVEL 200

#### First Semester

Course	Title	Credit
BCH 2301	General Biochemistry I	3
BIO 2201	Genetics I	2

BIO 2202	Introductory Ecology	2
BIO 2203	General Physiology	2
CHM 2241	Organic Chemistry	2
CSC 2201	Introduction to Computer Science	2
GSP 2201*	Use of English	2
GSP 2206	Peace and Conflict Studies	2
MCB 2201	General Microbiology	2
	Total	**17/19

**\*For Direct Entry (DE) Students Only**

**\*\* 17 credits for regular students while 19 credits for DE.**

### Electives

Course	Title	Credit
BCH 2202	General Biochemistry II	2
BIO 2208	Molecular Biology	2
MCB 2202	General Microbiology II	2

### Second Semester

Course	Title	Credit
BIO 2204	Biological Techniques	2
BIO 2205	Cell Biology	2
BIO 2206	Biostatistics	2
BIO 2307	Genetics II	3
BOT 2202	Seedless Plants	2
GSP2202*	Use of Library, Study Skills and ICT	2
GSP2204	Foundation of Nigerian Culture, Government and Economy	2
GSP2205	Logic and Philosophy	2
ZOO 2202	Chordata	2
ZOO 2301	Invertebrata	3
	Total	20/22

**\*For Direct Entry (DE) Students Only**

**\*\* 20 credits for regular students while 22 credits for DE**

**TOTAL- 37/41 CREDITS**

### LEVEL 300

#### First Semester

Course	Title	Credit
BIO 3102	Field Course I	1
BIO 3207	Biosystematics	2
BIO 3309	Introductory Nematology	3
EEP 3201	Entrepreneurship and Innovation	2
MCB 3302	Pathogenic Bacteriology	3
ZOO 3301	Protozoology	3

ZOO 3302	Vertebrate Comparative Anatomy	3
ZOO 3303	Animal Physiology	3
ZOO 3305	Basic Entomology	3
ZOO 3306	Animal Ecology	3
	Total	26

**Second Semester**

Course	Title	Credit
ZOO 3699	SIWES	6
	Total	6

**TOTAL- 32 CREDITS**

**LEVEL 400**

**First Semester**

Course	Title	Credit
BIO 4213	Field Course II	2
BIO 4305	Embryology	3
BIO 4307	Hydrobiology	3
ZOO 4201	Review Essay	2
ZOO 4202	Applied Entomology	2
ZOO 4305	Nigerian Animals	3
ZOO 4313	Parasitology	3
ZOO 4315	Wildlife Ecology & Conservation	3
	Total	21

**Second Semester**

Course	Title	Credit
BIO 4308	Fisheries and Aquaculture	3
BIO 4313	Soil Ecology	3
EEP 4201	Venture Creation and Growth	2
ZOO 4699	Research Project	6
	Total	14

**TOTAL- 35 CREDITS**

## Course Syllabus

### LEVEL 100

#### BIO 1201\* General Biology I

Zoology as a discipline, characteristics of animals as living things; cell as the basic unit of living things (animals); cell structure, organization, cellular organelles, tissues, organs and systems. Classification of animals, general reproduction, and concepts of inter-relationships in animals. Heredity and evolution. Animal ecology (definition) and habitats.

#### BIO 1202\*\* General Biology II

General survey of the animal kingdom; similarities and differences in external morphology in Protozoa, Platyhelminthes, Annelids, Arthropods, Fishes, Amphibians, Reptiles, Birds and Mammals. Division of animal taxa in the animal kingdom.

#### BIO 1203\* General Biology III

Same as BIO 1201 but with emphasis on plants.

#### BIO 1204\*\* General Biology IV

Same as BIO 1202 but with emphasis on the Plant Kingdom, Bacteria, Viruses, Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms.

### LEVEL 200

#### BIO 2201\* Genetics

Heritable and non-heritable characteristics of living organism, the chromosome theory of inheritance, the chromosome structure of the eukaryotes and prokaryote (Bacterial and Viruses). Linkage, cross-over, sex-linkage, sex chromosomes and sex determination. The mechanisms of genetic recombination. Introduction to population genetics

#### BIO 2202\* Introductory Ecology

Introduction to ecological concepts and theories, broad divisions of ecology, ecosystem and its components, e.g. species and populations ecological niches and competition, energy flow, productivity, nutrient and water cycles. Components of the abiotic environment, lithosphere, hydrosphere, atmosphere. Components of the biotic environment; types of biomes, Tundra, Taiga, Deciduous forests, Grassland, Desert, Tropical Rainforest, Biogeographical regions; Australian, Neotropical, Neoartic, Paleartic, Oriental, Ethiopian, Ecosystem and its types.

#### BIO 2203\* General Physiology

Physio-chemical progresses in animals and plants; diffusion, osmotic pressure and osmolality, water potential, turgor, diffusion, pressure, plasmolysis, Gibbs-Donan relationship, Gas exchange, partial pressures (Tension), Hydrogen-Ion concentration (pH). Henderson-Hasselbach equation, buffers in physiology, respiration and photosynthesis; RQ' and QIO'S in relation to metabolism, photosynthesis, oxygen and carbon dioxide exchange.

#### BIO 2204\*\* Biological Techniques

The microscope, types of microscopes and their uses. Preparation of microscopic slides, photometry, calorimetry, chromatography, conductometry, experimental designs.

#### BIO 2205\*\* Introductory Cell Biology

Light, phase-contrast, Dark-field and Electron Microscopy, Autoradiography, Florescence, Cell cycles, Introductory cytogenetics, History and present trends in cell biology, Reproduction and cell division, cell differentiation and growth of cell, molecular basis of cell structure and developmental cell biology, protein and nucleic acids.

#### BIO 2206\*\* Biostatistics

Use of statistical methods in Biology and agriculture. Frequency distribution, Law of probability, the binomial, Poisson and normal frequency distributions, Estimations and Tests of Hypothesis. Design of simple Agricultural and Biological experiments, Analysis of variance and co-variance, simple regression and correlation, contingency tables, Somenon-parametric tests

#### BIO 2208\*\* Molecular Biology

Light, Phase-contrast dark field and Electron Microscopy, Autoradiography, Florescence, Cell cycles. Introductory cytogenetics, Biogenesis of microtubules, microfilaments, golgi bodies and mitochondria, membrane interactions. Introduction to bioenergetics and thermo-dynamics. ModernMolecular Biology techniques: DNA and RNA Extraction techniques, Electrophoresis, Polymerase Chain reaction (PCR), Primers, Introduction to sequencing.

#### BIO 2307\*\* Genetics II

Pre-requisite: BIO 2201

Selected topics from population genetics, cytogenetics, microbial genetics, animal and plant genetics; biochemical and biomedical genetics, human genetics; further consideration of various deviations from basic principles, pedigree analysis, gene interactions.

#### ZOO 2202\*\* Chordata

Functional biology of all vertebrate phyla, including the structure and functions of their organ system. Bionomics, evolution and adaptive radiation, Zoogeography

#### ZOO 2301\*\* Invertebrata

A survey of all the invertebrate phyla.

#### LEVEL 300

##### BIO 3102\* Field Course I

Sampling techniques in local habitats; Qualitative and quantitative study of plants and animals in terrestrial and aquatic habitats.

##### BIO 3207\* Biosystematics

Principles and methods in biosystematics concept of Taxonomic characters. Morphological, anatomical, palynological, embryological, cytological and phytochemical characters. Principles used in the delimitation of taxa and attribution of

rank. Numeral taxonomy. Concepts of specific and intra specific categories. Morphological study of selected plant families to illustrate evolutionary tendencies and phylogenetic relationships.

#### BIO 3306\* General Physiology II

Pre-requisite: BIO 2203

A general study of osmoregulation, excretion, transport, homeostasis and their coordination in animals. Plant water relationships, growth regulation. Physiological aspects of crop yield

#### BIO 3309\* Introductory Nematology

Principal characteristics of nematodes, morphology, position and outlines of classification of nematodes. Morphology and biology of important plant parasitic nematodes and their economic importance. Nematological techniques. General principles and methods of controlling nematodes.

#### ZOO 3301\* Protozoology

Pre-requisite: ZOO 2301

Classification and evolutionary relationships of the protozoa, Macro and micro structure of protozoa. The role of protozoa in ecosystems. The ecology of protozoa, their physiology and biochemistry. Life histories of protozoa of medical and veterinary importance, with emphasis on tropical species; the pathology, epidemiology and control of protozoan infections

#### ZOO 3302\* Vertebrate Comparative Anatomy

Functional comparative anatomy of the organ systems in vertebrates.

#### ZOO 3303\* Animal Physiology

Pre-requisite: BIO 2203

The principles of physiological adaptation and homeostasis. Metabolism measurement and rates; thermal relations of animals. Vertebrate digestive systems: Ruminant digestion. Respiratory systems of fish, amphibia, reptilia, birds and mammals. Comparison of respiration in water and air. Air and water breathing vertebrates. Respiratory pigments, right and left shift of Oxygen Dissociation Curve. Respiratory and circulatory changes in high altitude vertebrates and diving mammals. Osmo-regulation and excretion evolution of vertebrate kidney. The vertebrate nervous system; membrane potential; action potentials. Muscle structure and physiology. Vertebrate endocrinology. Outline and comparison and nervous system.

#### ZOO 3305\* Basic Entomology

Insect evolution, classification and distribution. Organization of external structure. Ingestion, digestion, excretion, blood circulation and nervous system. Behaviour and ecology of social insects.

#### ZOO 3306\* Animal Ecology

The ecology of local terrestrial and aquatic animals; growth rate and age, structure of animal populations, natality and mortality, survivorship curves. Life tables and K-factor

analysis. Competition. The natural regulation of animal numbers. Population cycles. The dynamics of predator prey systems. The ecology of African mammals. Behavioural ecology.

#### ZOO 3699\*\* Students' Industrial Work Experience Scheme (SIWES)

Industrial/Field experience in any of the following:

- a) Fisheries
- b) Wildlife Management
- c) Biology of Aquatic Environment
- d) Pest and vector Control
- e) Animal and Public Health

#### LEVEL 400

##### BIO 4305\* Embryology

Molecular genetic aspects of development. A detailed study of the cellular and multicellular basis of development (Comparative).

##### BIO 4307\* Hydrobiology

Physical and chemical aspects of freshwater environments, spatial and temporal patterning of light, temperature and Oxygen. Freshwater flora and fauna with particular reference to West Africa. Plankton, benthic invertebrates, fish and plant communities, production and energy flow. Characteristics of African Freshwater. Case studies of various African freshwater habitats; a tropical swamp (Lake Chilwa), a warm spring (Wikki spring), an ancient lake (Lake Tanganyika), a new man-made (Lake Kainji and Tiga Lake). Problems associated with tropical freshwater, eutrophication, pollution and water-linked diseases.

##### BIO 4308\*\* Fisheries and Aquaculture

Review of the fish fauna of West Africa with special reference to Nigeria. Methods used in fisheries: sampling, examination and tagging. Age and growth, determining growth from otoliths, opercula and other bones; determining growth from length-height relationships, back calculation, production and productivity; estimation of population numbers, biomass and mortality; food analysis; assessment and management of fisheries, fish farming: principles and practice; farm design and construction, fish farm management; elements of fish nutrition; diseases and breeding, overview of aquaculture in global food security.

##### BIO 4313\*\* Soil Ecology

Classification and characterization of soils. Chemical components and analysis of soils and plant tissue. Plant, soil and water relationships. Physical and chemical properties of soil. Detritus organisms. Cycling of mineral and nutrient pool.

##### ZOO 4201\* Review Essay

Collection of literature on contemporary issues in Zoology from various sources and organization of same in form of a scientific report.



#### ZOO 4213\* Field Course II

Sampling techniques in local habitats; Qualitative and quantitative study of plants and animals in terrestrial and aquatic habitats.

#### ZOO 4202\* Applied Entomology

Pre-requisite: ZOO 3305

Classification of economically important insects. Biology and ecology of insects of agricultural and medical importance. Control of insecticide usage and application in Nigeria. Alternatives to insecticides. Introduction to pest management. Short course on the application of entomological study to the solution of a major pest problem in Nigeria.

#### ZOO 4305\* Nigerian Animals

General survey of local molluscs, arthropods and vertebrates.

#### ZOO 4313\* Parasitology

Principles of parasitology and Zoo-economic effects. Introduction to parasitism: history and evolution of parasitism; types of parasitism, host-parasite relationships. Parasitic protozoa, trematodes, cestodes, nematodes, acanthocephalans, leeches arthropods.

#### ZOO 4315\* Wildlife Ecology and Conservation

Dynamics of wildlife population. Techniques of wildlife investigations. Principles of wildlife management. The wildlife resources of Nigeria: conservation policies, problems and prospects. World wildlife resources, differences in values, management philosophies and traditions.

#### ZOO 4699\*\* Project

A short supervised research project in any special area of Zoology.

**NB: Asterisk (\*) against a course means it is offered in the first semester while Double asterisk (\*\*) means the course is offered in second semester.**

### **STUDENT'S WELFARE**

#### Students' Academic Advising

Students' in the program are assigned to an academic staff as Level Coordinator. The Level Coordinator advises the students' on the appropriate choice of courses, registers the student, keeps his/her records and computes his/her results until the student graduates from the University. The Department appoints an academic staff as an advisor to the Biological Sciences Student Association (BIOSSA) to assist them in organizing activities and coordinates spending of BIOSSA's resources.

### **EXAMINATION**

This involves setting, conduct, evaluation schemes and moderation schemes (internal and external) for degree examination and the issuance of results.

- c. **Setting of examination questions:** Examination question papers are set by course instructors and submitted to the Chief Examiner (The Head of Department) for vetting. The questions are delivered to External Examiners for further moderation.

- d. **Conduct of examinations:** The Department appoints invigilators and arranges venues for its examinations in collaboration with the Faculty. Results of examinations are compiled by course instructors and submitted to level coordinators for computation of student's Cumulative Grade Point Average (CGPA).
- e. **Evaluation and Moderation Schemes:** Each course has its evaluation schemes, which the instructor must employ in arriving at student's final score. A typical evaluation scheme is made up of laboratory assessment, continuous assessments and examination. The level coordinators collate and present the results to both the Departmental and Faculty Board of Examiners for recommendation to the University Senate for Approval.
- f. **Issuance of Results:** The Faculty publishes students' results after the approval by Senate. The Department issues results to students across all levels, however, graduating students also receive their Statement of Results and await their Certificates.
- g. **Examination Malpractice/Misconduct:** The penalty for any form of examination malpractice is EXPULSION. It may even lead to refusal of admission to other Nigerian Universities. Furthermore, any student found guilty of forging certificates, transcripts and other admission documents shall be expelled from the University.

## GRADING SYSTEM

Bayero University, Kano operates the Course Unit System, following the GPA/CGPA grading system. The following are some of the important features of the system:

1. **Letter Grades:** Each course is assessed by a letter grade (A, B, C, D, E and F). each of the letters with exception of 'I', corresponds to a range of marks as follows;

A = 70 - 100 %	D = 45 - 49 %
B = 60 - 69 %	E = 40 - 44 %
C = 50 - 59 %	F = 0 - 39 %

The grades 'A to E' denotes pass, with 'A' being the best, while 'F' denotes failure in a course.

2. **Incomplete Grade 'I':** This is awarded to a student who has completed all aspects of a course with the exception of examination. However, for this to be applicable, the student MUST apply to Senate through the Faculty with valid reason(s) for being absent in the examination. If the Senate approves, the student will not carryover the course but rather register and sit for the examination ONLY in the subsequent session. His/her continuous assessment will be carried forward and added to the examination marks he/she earned.

3. **Grade Point (GP):** Each letter grade except 'I' is assigned a Grade point as follows;

A = 5	B = 4	C = 3	D = 2	E = 1	F = 0
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No grade point is assigned to 'I'

4. **Points:** All points obtained in a course are the product of the credit value of the course and the grade point obtained in the course. Thus, if a student obtains a 'B' in a three-credits course, the points will be  $4 \times 3 = 12$ .

5. **Grade Point Average (GPA):** The semester Grade Point Average is defined as the weighted average of all the grade points obtained in a semester by the credits registered. It is an indication of the student's (average) performance in a semester. During computing the GPA, credit values of course(s) graded incomplete are not counted. The mathematical expression is as follows;

$$GPA = \frac{\text{Total Points Earned in a Semester (TPE)}}{\text{Total Credits Registered in a Semester (TCR)}}$$

**6. Cumulative Grade Point Average (CGPA):** The Cumulative Grade Point Average (CGPA) is defined as the weighted average of all the grade points obtained by a student from the time he/she joined the program of study up to the time of compilation. Thus, the CGPA gives an indication of student's overall performance in the program of study. The CGPA is computed as follows;

$$CGPA = \frac{\text{Cumulative Points Earned in all Semesters (CPE)}}{\text{Cumulative Credits Registered in all Semester (CCR)}}$$

Note that, credits for courses with incomplete grading are not counted during totaling of credits earned.

### 7. Interpretation of CGPA

CGPA	Honours	Remarks
4.50 - 5.00	First Class	Excellent
3.50 - 4.49	Upper Second Class (2:1)	Very Good
2.40 - 3.49	Lower Second Class (2:2)	Good
1.50 - 2.39	Third Class	Fair
1.00 - 1.49	Pass	Satisfactory
0.00 - 0.99	Fail	Poor

**8. Sample of Student's End of Session Report Form**



**BAYERO UNIVERSITY KANO**

KANO STATE, NIGERIA

**STUDENT'S END OF SESSION REPORT FORM**

**NAME:** .....

**REG. NUMBER:** .....

**FACULTY:** FACULTY OF LIFE SCIENCES

**DEPARTMENT:** DEPARTMENT OF BIOLOGICAL SCIENCES

**PROGRAMME:** B. Sc. Zoology

**SESSION:** .....

**YEAR OF STUDY:** .....

**PREVIOUS CGPA:** .....

**CURRENT CGPA:** .....

Semester	Code	Course Title	Credits	Grade	GP	PE
<b>First Semester</b>						
		TCR= , TCE= , TPE=		GPA=		
<b>Second Semester</b>						
		TCR= , TCE= , TPE=		GPA=		
		CCR= , CCE= , CPE=		CGPA=		

Remarks: \_\_\_\_\_

\_\_\_\_\_  
Head of Department's Signature and Stamp

### A. ACADEMIC STAFF PROFILE

S/N	Name	Academic Qualification	Area of Specialization	Rank	Status (Tenure, Visiting, Sabbatical, Contract, Adjunct)
1	Prof. Nuradeen Abdullahi	B.Sc., M.Sc., Ph.D.	General Biology, Microbiology, Agricultural Entomology.	Professor	Tenure
2	Prof. Sani Ibrahim	B.Sc., M.Sc., Ph.D.	Hydrobiology, Freshwater Ecology	Professor	Tenure
3	Prof. Zainab Tukur	B.Sc., M.Sc., Ph.D.	General Biology, Medical Entomology	Professor	Tenure
4	Prof. Nasir Tukur Dabo	B.Sc., M.Sc., Ph.D.	General Biology, Parasitology, Microbiology, Public Health	Professor	Tenure
5	Prof. Safianu Rabi	B.Sc., M.Sc., Ph.D.	Ecology, Conservation Biology	Professor	Tenure
6	Prof. Ibrahim Lawal Abdullahi	B.Sc., M.Sc., Ph.D.	Ecology, Conservation Biology	Professor	Tenure
7	Prof. Tijjani S. Imam	B.Sc., M.Sc., Ph.D.	Environmental Biology, Ecotoxicology, Public Health	Professor	Tenure
8	Dr. Auwalu H. Audi	B.Sc., M.Sc., Ph.D.	General Biology, Agricultural Entomology, Pest Management	Senior Lecturer	Tenure
9	Dr. Halima Musa Rabi	B.Sc., M.Sc., Ph.D.	Environmental microbiology, Environmental Biology, Biotechnology	Senior Lecturer	Tenure
10	Dr. Kabiru Suleiman	B.Sc., M.Sc., Ph.D.	General Biology, Hydrobiology, Freshwater Ecology	Senior Lecturer	Tenure
11	Dr. Farouk Sani Nas	B.Sc., M.Sc.,	General	Senior	Tenure

		Ph.D.	Biology, Parasitology	Lecturer	
12	Dr. Ahmad Kabir Maigari	B.Sc., M.Sc., Ph.D.	Parasitology, Protozoology, Public Health	Senior Lecturer	Adjunct
13	Dr. Usman Bawa	B.Sc., M.Sc., Ph.D.	Applied Ecology, Conservation	Senior Lecturer	Tenure
14	Dr. Kabiru M. Umar	B.Sc., M.Sc., Ph.D.	Molecular Biology, Animal Physiology, Biotechnology	Senior Lecturer	Adjunct
15	Dr. Abba Salisu	B.Sc., M.Sc., Ph.D.	Fisheries And Aquaculture	Senior Lecturer	Tenure
16	Dr. Asiya A. Mukhtar	B.Sc., M.Sc., Ph.D.	Environmental Biology	Senior Lecturer	Tenure
17	Dr. Rakiya Audu	B.Sc., M.Sc.PhD	Fisheries And Aquaculture	Senior Lecturer	Tenure
18	Dr. Zainab M. Sani	B.Sc., M.Sc., Ph.D.	Environmental Biology	Senior Lecturer	Tenure
19	Dr. Ali Sani	B.Sc., M.Sc., Ph.D.	Environmental Biology, Ecotoxicology	Lecturer I	Tenure
20	Dr. Aminu I. Darma	B.Sc., M.Sc., Ph.D.	Environmental Biology,Soil Science	Lecturer I	Tenure
21	Mal. Aziza T. Zawiyya	B.Sc., M.Sc.	Parasitology	Lecturer I	Tenure
22	Mal. Halima S. Mamman	B.Sc., M.Sc.	Hydrobiology	Lecturer I	Tenure
23	Mal. Fatima M. Yusuf	B.Sc., M.Sc.	Zoology, Parasitology	Lecturer I	Tenure
24	Mal. Suwaiba A. Umar	B.Sc., M.Sc.	Environmental Biology	Lecturer I	Tenure
25	Mal. Buhari Bello	B.Sc., M.Sc.	Applied Biology (Ecology) Conservation	Lecturer I	Tenure
26	Mal. Fatima Waziri Saleh	B.Sc., M.Sc.	Environmental Biology	Lecturer I	Tenure
27	Mal. Surayya M. Salim	B.Sc., M.Sc.	Environmental Biology	Lecturer I	Tenure
28	Mal. Umar F. Suleiman	B.Sc., M.Sc.	Environmental Biology	Assistant Lecturer	Tenure
29	Mal. Aisha B. Abdullahi	B.Sc., M.Sc.	Parasitology	Assistant Lecturer	Tenure
30	Mal. Rukayya Adam	B.Sc., M.Sc.	General Biology Biotechnology	Assistant Lecturer	Tenure

31	Mal. Amina Jibrin Inuwa	B.Sc., M.Sc	Ecology and Environmental Biology	Assistant Lecturer	Tenure
32	Mal. Ammar Bashir Umar	B.Sc., M.Sc	Ecology and Environmental Biology	Assistant Lecturer	Tenure

#### B. TECHNICAL STAFF PROFILE

S/N	Name	Academic Qualification	Area of Specialization	Rank	Status (Tenure, Visiting, Sabbatical, Contract, Adjunct)
1	Hassan A. Garko	HND	Biology, Ecology	Chief Technologist	Tenure
2	Isah A. Isah	HND	Biology/Microbiology	Principal Technologist	Tenure
3	Idris Garba	HND	Biology, Ecology	Principal Technologist	Tenure
4	David S. Okolo	HND	Glass wares	Senior Technologist	Tenure
5	Bashir D. Yakasai	B. Sc., M. Sc.	Biology, Insect Ecology	Technologist I	Tenure
6	Mubarak S. Yakubu	ND, B. Sc.	Fisheries, Biology	Technologist I	Permanent Staff
7	Maryam I. Yahaya	B. Sc.	Biology, Ecology	Technologist I	Permanent Staff
8	Hadiza H. Kanar	B. Sc.	Environmental Biology	Technologist II	Permanent Staff
9	Nabila N. Zaharadeen	B. Sc.	Applied Biology	Technologist II	Permanent Staff
10	Kamal Saidu	B. Sc.	Biology, Animal Care	Technologist II	Permanent Staff
11	Zainab M. Bello	B. Sc.	Applied Biology	Technologist II	Permanent Staff
12	Zanna Ahmed	HND, B. Sc.	Biology, Ecology	Technologist II	Permanent Staff
13	Enemakwu C. Alhassan	B. Sc.	Biology	Technical Officer II	Tenure

### C. ADMINISTRATIVE STAFF PROFILE

S/N	Name	Academic Qualification	Rank	Status (Tenure, Sabbatical, Adjunct) Visiting, Contract,
1	Abba I. Abubakar	ND	Ag Confidential Secretary, Executive Officer	Permanent Staff
2	Umar Muhammad Jumare	SSCE, ND	Chief Clerical Officer	Permanent Staff
3	Ibrahim Sarki	SSCE	Head Cleaner	Permanent Staff
4	Isyaku Uba	SSCE	Head Cleaner	Permanent Staff
5	Balaraba Ibrahim	SSCE	Head Cleaner	Permanent Staff
6	Mustapha Ishaq	SSCE	Head Gardener	Permanent Staff