DELTA STATE UNIVERSITY

ABRAKA

FACULTY OF SCIENCE

DEPARTMENT OF BOTANY

STUDENTS INFORMATION HANDBOOK

09-09-2020

FOREWORD

This handbook is designed specifically for staff and undergraduate students in the Department of Botany, Faculty of Science, DELTA STATE UNIVERSITY, ABRAKA and for all those who will be involved in operating the academic programme of the Department.

The Handbook contains:

i. A brief History of the University
ii. General Information on the Department
iii. List of Staff in the Department
iv. Admission Requirements for the Department
v. Regulations Governing Registration of Courses and Conduct of Examinations
vi. Detailed Course Content for the Department

The programme of the Department:

Lead to the Award of Bachelor of Science Degree in Botany (B.Sc Hons.)

A review of this handbook may be necessary in future to reflect changes in the academic policy of the University in accordance with senate decisions.

I wish to advise all students of the department to carefully study this handbook and constantly refer to it as a guide throughout their programme in the University.

Finally, I say congratulations on your admission into the Department of Botany, and welcome to the Delta State University.

On behalf of the Department of Botany, I wish all the students of the Department a very successful academic pursuit in the University.

Dr.(Mrs.) Ebele M. Ilondu

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THE VISITOR, CHANCELLOR, PRO-CHANCELLOR AND PRINCIPAL OFFICERS OF THE UNIVERSITY

THE VISITOR
His Excellency, Sen. Dr. Ifeanyi Arthur Okowa
Executive Governor, Delta State of Nigeria

CHANCELLOR
Hon. Justice Godwin Adolphus Karibi-Whyte, JSC (Rtd)

PRO-CHANCELLOR AND CHAIRMAN OF COUNCIL OF THE UNIVERSITY
Professor Sam Egite Oyovbaire

VICE-CHANCELLOR
Professor Andy Ogochukwu Egwunyenga
B.Sc. (Lagos), M.Sc., Ph.D. (Jos)

DEPUTY VICE-CHANCELLOR (ADMINISTRATION)
Professor Samuel O. Asagba
B.Sc. (Benin), M.Sc. (Lagos), Ph.D. (Benin)

DEPUTY VICE-CHANCELLOR (ACADEMIC)
Professor (Mrs.) Grace Ngozi Ojieh-Ogwu
NCE (Abraka), B.Ed., M.Ed., (Benin), MFA, M.A., Ph.D. (Nigeria)

PROVOST, ASABA CAMPUS
Professor Patrick Enamiroro Oghuvbu
B.Ed., M.Ed., (Benin), Ph.D. (Abraka)

PROVOST, OLEH CAMPUS
Professor Alex Ifo Amata

REGISTRAR
Mr. Daniel A. Urhibo
B.Sc. (Hons) Uniport, MIRL (Delsu), MANUPA, FICA, FIPND

BURSAR
Mr. Justice O. Egbare
FCA, MBA

UNIVERSITY LIBRARIAN
Professor Stephen O. Uwaifo*(CLN)*
NCE (Abraka), BA.LS, MLS (BUK), Ph.D. (Ibadan)

NOTES ON UNIVERSITY LOGO

(A) SHAPES INCORPORATED IN THE DESIGN

(i) The overall circular shape represents the cognate and holistic relationship of the constituent parts of the state.
(ii) The book represents academic knowledge and research.
(iii) The ornamental ivory tusks represent the culture upon which all knowledge must be predicated.
(iv) The derrick represents the mineral endowment of the state.
(v) The broken lines represent water which is a prime feature of the State.

(B) **COLOURS INCORPORATED IN THE DESIGN**

Three colours are incorporated in the University Logo. They are Sky Blue, Prussian Blue, and Black

(i) Sky blue represents water which is found in abundance in the State.
(ii) Prussian blue is generally a colour for love which can lead to peaceful search for knowledge and truth.
(iii) Black represents the "black gold" (oil) which constitutes the bulk of the State's economy and prosperity.

MOTTO: Knowledge, Character, Service.

A BRIEF HISTORY OF THE UNIVERSITY

Delta State University was established on 30th April, 1992 by the then Executive Governor of the State, Olorogun Felix O. Ibru. It was announced that the University would start off with five Faculties, namely: Education, Agriculture, Arts, Science and the Social Sciences. Besides Abraka, there would be the Asaba Campus. While four of the Faculties were to be located at Abraka, the fifth, the Faculty of Agriculture, was to be at the Asaba Campus. Ten Faculties have since been established accordingly and are in full operation with 53 departments and offering about 64 degree programmes. Delta State University, though new and one of the youngest in Nigeria, has a long and impressive history as a centre of education. It metamorphosed from the renowned Government Teachers Training College, Abraka, which in the forties produced Grade III and subsequently Grade II teachers for our schools, to the reputable College of Education which awarded the Nigerian Certificate of Education.

Later, in affiliation to the University of Benin, it offered degree programmes until 1985 when it became a Faculty of Education of the then Bendel State University, Ekpoma. It became an autonomous University in April, 1992, and the conversion of the Ekpoma Campus to Edo State University in December, 1991. However, in an amendment to the law establishing the University in 1992, the State Government established a third Campus of the University at Oleh that is the Faculty of law.

The establishment of Oleh Campus brings to force the State Government's policy in having a campus of the University in each of the three Senatorial Districts of the State.

With Abraka as the Main Campus of the University, the Academic Programmes of the University are distributed as follows:-

ABRAKA CAMPUS

(a) Education
(b) Arts
(c) Social Sciences
(d) Pure Science
(e) Medical Sciences
(f) Pharmacy

ASABA CAMPUS

(a) Agriculture
(b) Management Sciences
(c) Environmental Studies

OLEH CAMPUS

(a) Law
(b) Engineering

BRIEF HISTORY OF THE DEPARTMENT OF BOTANY

When the Institution came into being as Delta State University in 1992, Departments of Botany, Microbiology and Zoology were separately established. During the era of sole administration, the three Departments were merged into one as Department of Biological Sciences in 1997/98 Academic Session. In February 2001, the Department of Biological Sciences was partially demerged when a separate Department of Zoology was created, leaving Botany and Microbiology as one Department. It was finally demerged from the Department of Botany/Microbiology to the Department of Botany in 2007.

DEPARTMENT OF BOTANY DEEGREE PROGRAMME

1. Degree Programme

The Department offers degree programme leading to the award of a Bachelor of Science (B.Sc. Hons.) degree in Botany

2. Philosophy

The Department of Botany is geared towards the production of scientifically and technologically oriented manpower necessary for the development of the country

3. Objectives

The courses are therefore designed to:

i. Provide the student with general understanding of plant science, together with an insight into some specialized and applied aspect of the discipline.

ii. Aid the students to acquire knowledge and develop skills applicable in science based industries

iii. Make the students acquire skills to monitor environmental pollution

iv. Provide service courses to students in other disciplines

v. Co-operate with the Faculty of Education to produce Biology teachers for secondary schools and colleges of education

vi. Prepare students for postgraduate courses in different areas of Botany

Admission Requirements

i. Joint Matriculation Examination (JME) – Entry Requirement

In addition to an acceptable pass in the University Matriculation Examination (UME), candidates intending to study the four (4) years programme in Botany must possess **WASC/GCE 'O' or SSCE** Credit passes in five subjects, which must include Biology, Chemistry Physics, Mathematics and English Language.

UME Subjects: English Language, Biology, Chemistry and either Physics or Mathematics.

ii. Direct Entry Requirements

For admission into the three (3) years degree programme, candidates must have met the University Matriculation requirements in the subjects of the GCE 'O' level SSCE (WAEC / NECO) plus GCE "A" Level passes in Chemistry and either Biology/ Botany

COURSES	DIRECT ENTRY REQUIREMENTS	UME ENTRY REQUIREMENTS	UME SUBJECTS
B.Sc. (Hons.) Botany	G.C.E. "A" level passes in Chemistry and either Biology/Botany Merit in DELSU Diploma in Biology Education may be considered	Five (5) "O" Level credits must include Mathematics, English Language, Chemistry, Physics, and Biology	English Language, Biology, Physics and Chemistry

ACADEMIC REGULATIONS

1. Matriculation

Any Student admitted into the University for the first time to pursue a degree or diploma programme (including transferred students) will be required to matriculate. Such a student must have registered for his/her course of study. Matriculation involves taking a matriculation oath and signing the matriculation register. Until this is done, the student shall not be regarded as a bona fide student of the University.

2(a) Deferment of Admission

On admission into the University for a particular session, a candidate who, for any reason is unable to take up the offer may apply in writing to the Registrar for the deferment of his/her admission. Such a student must matriculate and pay the prescribed acceptance fee before making the application. The student should in addition pay the approved deferment fee. The period of deferment should not be more than one session. The application should include evidence of payment of the prescribed fees. Such application should reach the Registrar not later than one month after matriculation for the given session. If the Registrar is satisfied that the student is eligible for matriculation/registration in the University, he processes and sends the application to the faculty concerned for onward recommendation to Senate.

2(b) **Temporary Withdrawal from Studies**

(i) Only students who have matriculated and duly registered in the University for a minimum period of one semester are eligible to apply for temporary withdrawal from the University.

(ii) Such applications containing the details of studentship should be routed through the Head of Department to the Dean of the Faculty for necessary action and recommendation by the Faculty Board to Senate.

(iii) The period of temporary withdrawal from the University by a student shall normally not be more than one academic year.

(iv) The Registrar shall convey the decision of the Senate to the student immediately.

3. **Transfers**

(i) Inter-university Transfer

All candidates seeking admission into the University by transfer from other Universities should purchase the prescribed form from the Academic Office after paying and obtaining a Bursary receipt for the fee paid. The duly completed form should be submitted along with the transcript of academic records to the Admission Office at least two weeks before the matriculation date for that session. On receipt of the forms, the Admissions Office processes and sends them to the appropriate Dean of Faculty/Head of Department for their consideration and recommendation to the Secretary, University Admissions Board who collates and forwards them to the University Admissions Board for consideration. The Admissions Office must ensure that all transcripts are properly verified and confirmed authentic and that no student coming from other University is a cult member. Inter-University transfer should normally be allowed up to 200 level.

(ii) **Inter Faculty/Intra Faculty Transfer**

Students wishing to transfer from one Faculty/Department to another must satisfy the University and Faculty/Departmental requirements. In addition, they must have taken at least three core courses in their 100 level in the case of Intra Faculty Transfer. When such transfer is eventually affected, the students must register all the remaining 100 level core courses in addition to their 200 level courses.

(iii) Inter Faculty and Intra-Faculty transfers may not exceed 10% of the student population in either case for a given session.

4. **Classification of Courses**

(i) Core Courses

A core course is a compulsory course that must be taken and passed before graduation and should be included in the computation/classification of degree results as in NUC guidelines.

(ii) **Pre-requite**

A pre-requite is a course, the knowledge of which is required prior to the taking of another specified course. A student is deemed to have obtained this pre-requite knowledge if he/she obtains a mark less than 30% but will not be credited with any Grade point in the course concerned except he/she scores a minimum of 45%. This particular clause is without prejudice to Faculty requirements.

(iii) **Elective**

Elective courses are optional courses within or outside a discipline, from which students may choose a number for the purpose of fulfilling the minimum requirements for the award of a degree or for the purpose of broadening their horizons. They may be chosen with the assistance of the Head of Department or Departmental/Level Adviser.

(iv) **General Studies**

These comprise Use of English and Library, Logic, Philosophy and Human Existence, History, Philosophy of Science and Technology, Nigerian People, Culture and Entrepreneurial, Introduction to Computer. They must be taken and passed before graduation.

5. **The Course Credit Unit System**

(i) All Faculties in the University operate the course unit system.

(ii) Each course unit shall have alphabet to indicate the subject area and levels of course representing the years for the degree programme.

The numbering system is as follows:

Course Code	**Level**	**First Semester**	**Second Semester**
BOT	100	101-109; 121-129	111-119; 131-139
BOT	200	201-209; 221-229	211-219; 231-239
BOT	300	301-309; 321-329	311-319; 331-339
BOT	400	400-409; 421-429	411-419; 431-439

1st digit denotes level or year of study; 2nd digit even numbers (i.e. 0 and 2) denote first Semester Courses; odd numbers (i.e.) 1 and 3) denote Second Semester; while 3rd digit denotes the sequence (in the series) of courses in the department/degree option ranging from 1-9.

(iii) A course unit is the equivalent of one lecture/tutorial hour per week per semester each credit commensurate with the load allocated to a unit of one hour. Thus, one three-hour laboratory/practical class per week per semester earns 3 units.

(iv) Where a course is sessional, the contact hours double those based on semester system provided that the approved contact hours are maintained.

(v) Where a course is offered three hours in a week for a whole session of two semesters, the credit unit load assignable to such a course shall be 6 units. If, however, the contact is four hours a week for a session of two semesters, the credit load is 8 units.

(vi) Courses failed in one semester are carried over to, and registered for in subsequent semesters.

(vii) In course unit system, students may not repeat an entire year but can repeat only those courses which they failed and for which they need fulfill some requirements. Such failed courses must be registered first before the present level courses provided they do not register for more than the approved 48 credit units per session. Failed elective course(s) need not be repeated. However, core courses must be repeated until they are passed.

(viii) High premium shall be placed on projects, and, where applicable on Industrial Training and Teaching Practice.

(ix) A class Admit/Grade Card shall be issued to every student for each course registered for during the session. The Card shall enable the lecturer in-charge of a particular course to be able to exercise control over attendance at lectures. It shall also be used for submission of grades scored in the examinations along with the grade point. **Lecturers shall be required to certify that a student has attained a minimum of 75% contact hours before he/she is allowed to take the examination in the particular course**.

6. **Registration**

(i) It shall be mandatory for all students to register for courses at the beginning of the session in accordance with the University's rules made from time to time as approved by Senate.

(ii) All students shall register for courses within three weeks of the commencement of the first semester of each session.

(iii) A student shall be deemed to have begun his/her course of study on the date of his/her registration for that course.

(iv) Late registration may be allowed up to the end of the forth week after the commencement of the semester. This will be only in exceptional cases with the approval of the Head of Department, the Dean of the Faculty and the Registrar and on payment of the late registration fee at that time.

(v) Student may change, add or delete particular course within the first three weeks after the commencement of the semester. No course will be added or deleted four weeks after the commencement of the semester. Any change of course form submitted after this period shall be discountenanced.

(vi) A student who fails to register for courses at the end of the fourth week of the semester shall be deemed to have withdrawn from the University.

(vii) After registering for courses at the beginning of the semester, a student needs not register for examination.

(viii) An extension student shall be required to register for only the courses failed or carried over. This is subject to the conditions for withdrawal and probation.

7. **Work Load**

(i) Every full-time student shall be required to register for minimum of 15 credit units and maximum of 24 credit units per semester. Total units per session shall not be less than 30 and more than 48.

(ii) Each final year student is required to undertake a project which will earn him/her between 4 and 6 units. A student who fails to complete his/her project or whose project is rejected will have to complete/rewrite it and submit before graduation. Such a project shall not score more than a grade. However, such a student has the option of registering for, and completing the project in the following session. In that case, the project will be treated as a first attempt.

8. **First Degree Programme**

(i) Programme of study shall be provided leading to Bachelor's Degree to be denoted by letters as indicated below:

S/N	**DEPARTMENT**	**TYPE OF DEGREE**
a.	Botany	B.Sc.

(ii) The Degree shall be awarded with Honours.

(iii) Instruction shall be by courses and students shall be required to register for and take an approved combination of courses as stipulated by Senate on the recommendation of the Faculty Board.

(iv) At the beginning of the Programme, each student shall be assigned course adviser by the Head of Department.

(v) A staff of the University or any person approved by the Registrar on the advice of the Head of Department and the Dean of the Faculty may audit course(s) on payment of prescribed fee.

(vi) Unaudited student shall not be allowed to write the University examination and shall not be credited with any work done.

(vii) No student shall qualify for the award of an Honours Degree of the University if he/she spends more than two sessions beyond the normal period allowed for the programme. Such a student shall be awarded a pass degree. For instance, a 4-year degree programme should not exceed 6 years. Similarly, a 5 year degree programme should not exceed 7 years.

9. **Duration of Semester**

(i) The first and second semesters shall each last for between 17 and 18 weeks.This period shall include registration, teaching and examination. Not less than 12 weeks shall be devoted to teaching.

(ii) Programmes of study for the long vacation period shall last for between 11 and 12 weeks, 8 weeks of which shall be devoted to teaching.

10. **Examination**

(a) **Procedure**

(i) University examinations shall be held at the end of each semester for all semester courses and at the end of each session for all sessional courses.

(ii) Only candidates who are duly registered for courses in a given semester and have met their financial obligations to the University shall be eligible to sit for examination in those courses.

(iii) **To be eligible for an examination, a student is required to attain a minimum of 75% contact hours before he/she is allowed to take the examination in the particular course**.

(iv) Each Faculty shall appoint Faculty Examinations Officer who shall be responsible to the Dean of the Faculty. He shall liaise with the various Heads of Department to ensure that examination questions are set at the appropriate time.

(v) Every course assessment must consist of continuous assessment of at least 30% and course examination at most 70%. The pass mark for every course assessment is 45%.

(vi) Where a student repeats a course, the grade points at all attempts must be utilized in computing the cumulative grade point average.

(b) **Absence from Examination**

(i) Candidates must present themselves at the University examination for which they have registered.

(ii) Candidates who fail to do so for reasons other than certified ill-health or accident or for other reasons acceptable to the Dean shall be deemed to have failed that examination.

(iii) For the avoidance of doubt, failure to take cognizance of changes in the examination time-table and such lapses on the part of the candidates shall not be accepted as a reasonable excuse for absence.

(iv) A candidate who falls ill during an examination shall report to the Director of the University Health Services who shall subsequently submit a report in writing to the Dean of the Faculty after treating the candidate.

(v) A candidate who is unable to take any examination on grounds of illness, confirmed by the University Director of Health Services, or on grounds specified in (b) (ii) above may be allowed to sit for the examinations at the next available opportunity.

(vi) When necessary, on grounds of ill-health and certified by the Director of Health Services, examinations can be taken in the hospital or related locations.

(c) **Examination Malpractice and Disciplinary Action**

(i) Any student involved in any examination malpractices shall be made to complete the prescribed "Examination Malpractice/Irregularities Form" and submit to the chief Invigilator.

(ii) The Chief Invigilator shall submit in writing to the Dean, report on any examination malpractice within 24 hours after that examination.

(iii) On receipt of the report, the Dean shall promptly investigate the alleged malpractice.

(iv) The report/recommendation on each investigation shall within one week be forwarded to the Students' Disciplinary Committee which shall make appropriate recommendations to Senate.

(d) **Senate Approved Penalties for Examinations Malpractice**

(i) Cheating or spying in examination hall.
Penalty: Rustication for two semesters.

(ii) Fore knowledge of examination questions or the use of prepared examination answers in Hall (leakage)
Penalty: Expulsion

(iii) Impersonation in Examination
Penalty: Expulsion

(e) **Instruction to Candidates**

(i) Students shall not be admitted into the examination hall if they have not been duly registered by the various Faculties as having fulfilled the prescribed conditions of the course of study.

(ii) Eligible candidates shall report at the stipulated examination halls fifteen minutes before the start of the examination.

(iii) No candidate shall be allowed into the examination hall 30 minutes after the start of the examination.

(iv) No candidate shall be allowed to withdraw from the hall before 30 minutes of commencement of examination.

(v) Candidates may go to the toilet, during examination provided that they are accompanied throughout the period of absence by a suitable Invigilator. Such absence must not be unreasonably prolonged, and the candidate shall not be allowed any extra time by reason of such absence.

(vi) The Chief Invigilator may, under special circumstances, accept a candidate into the examination hall after 30 minutes of the start of the examination if he/she is satisfied that there are reasonable grounds for the lateness. A report of the situation must be formally made to the Faculty Examination Officer.

(vii) Candidates shall not be allowed to bring into examination hall any personal bags, textbooks, scrap notes or such other personal effects, except such materials as may be permitted for use in the same examination.

(viii) Candidates shall not work out of the examination hall with any answer sheets/booklets used or unused.

(ix) Candidates shall comply with instructions given by the Chief Invigilator as to the submission of their answer sheets at the conclusion of the examinations.

(x) It shall be the responsibility of each candidate to ensure that his/her examination sheets are duly accounted for to the Chief Invigilator at the examination hall.

(xi) All rough notes, scrap sheets, draft answers, etc which do not form part of the definitive answer sheets must be submitted after appropriate cancellation to the Chief Invigilator with the definitive answer sheets at the conclusion of the examination.

(xii) Candidates shall not talk to one another, give or receive from one another, any form of assistance, pens, eraser, pencils, rulers, etc.

(xiii) All questions pertaining to the examination must be directed to the Chief Invigilator or any of the accredited Invigilators.

(xiv) The Chief Invigilator shall report any examination misconduct formally to the Chief Examiner/Dean of the appropriate Faculty as specified by Senate.

(xv) Any contravention of any of the above rules and regulations shall constitute examination misconduct. All candidates shall comply with these regulations in their own interest.

(f) **Instructions to Invigilators**

(i) Invigilators shall report to the examination hall 20 minutes before the commencement of each examination.

(ii) Invigilators shall exercise constant and vigilant supervision over the candidates.

(iii) No person(s) other than the Invigilators, Attendants, Dean of Faculty, Head of Department, Representative of the examination committee, the Registrar's representative shall be allowed into the examination hall, except the course examiner who shall be present during the first 30 minutes and the last 30 minutes of the examination.

(iv) The sealed envelopes containing the question papers shall only be opened in the presence of the candidates.

(v) In the event of conflict between the time allowed for the examination as indicated on the examination question papers and that on the examination time-table, the time on the question paper shall be adhered to.

(vi) Invigilators shall tell the candidates the exact time at the start of an examination and thereafter inform them of the time at reasonable intervals.

(vii) Under special circumstances, the Chief Invigilator shall accept a candidate into the examination hall after 30 minutes of the start of the examination. Cases of admittance after the starting time of the examination shall be reported formally to the chief Examiner by the Chief Invigilator.

(viii) Invigilators shall ensure that personal effects such as bags, textbooks, scrap notes, etc are not brought into the examination hall by the candidates and that unused answer scripts are not taken out.

(ix) Candidates shall not leave the examination hall until after the first 30 minutes.

(x) No candidate shall leave the examination hall with the intention of returning without being accompanied by an attendant.

(xi) Silence shall be maintained throughout the duration of an examination.

(xii) Invigilators shall ensure that all candidates sign the attendance register.

(xiii) At the end of an examination, the invigilator shall collect and count the scripts before handing them over to the Chief Invigilator who shall sign answer booklets.

(g) **External Examiners**

The services of External Examiners approved by Senate, shall be required to moderate all final year examinations and in all professional examinations for all 300 level courses and above.

(h) **Submission of Examination Results**

Each department shall compile and compute its results and convene their Departmental Examination Board to consider the results. The results shall be sent to the Faculty Board of Examinations for consideration. The final results as recommended by the Faculty Board shall be presented to Senate for approval.

(i) **Publication of Examination Results**

The Faculty Board shall publish all provisional results. Such results however, shall be in the form of letter grades and for the final year results, professional degree classification.

(j) **Grading**

A five point grading system shall be adopted as follows:

Letter Grade	Percentage Score	Grade Point
A	70 and Above	5.0
B	60 – 69	4.0
C	50 – 59	3.0
D	45 – 49	2.0
E	0 – 44	0.0

(k) **Classification of Degree**

The following classification shall be adopted:

Grade Point	Class of Degree
4.50 – 5.00	First Class Honour
3.50 – 4.49	Second Class Honours (Upper Division)
2.50 – 3.49	Second Class Honours (Lower Division)
1.50 – 2.49	Third Class Honours
0.00 – 1.49	Fail

(l) **Essential Services During Examination**

(i) The University Health Services shall make first aid facilities available throughout the examination period.

(ii) The Director of Works and Services shall ensure adequate functioning of all electrical appliances at all examination venues.

11. **Maximum Period of Studentship for Graduation**

1. For a student to graduate from any of the programmes in the University, he/she must NOT EXCEED TWICE the minimum period allowed for the programme. The period of rustication, suspension and approved absence from studies shall not count in recording the number of years spent on a programme.
2. To qualify for an honours degree, a student must have spent not more than two sessions beyond the normal (minimum) period allowed for the programme.
3. No student shall be allowed to be on probation more than TWO TIMES on a programme of study in the University.
4. No student shall be allowed to change his/her programme of study more than ONCE during his/her stay in the University.
5. No student in the Diploma Programme shall be allowed to be on probation.
6. At the end of the second session of a Diploma Programme, a student may be allowed one more year of study subject to such a student having a minimum C.G.P.A. of 1.00.

Senate also reaffirmed parts of its earlier regulations guiding the award of degrees in the University as stated hereunder:

(i) A student must spend a minimum of two academic sessions in the University to qualify for the award of a degree of the University.

(ii) No student shall qualify for the award of an Honour degree of the University if he/she spends more than two sessions beyond the normal period allowed for the programme. Otherwise, such a student shall be awarded a PASS degree. For the avoidance of doubt, a three year degree programme for at most 5 years, 4 years degree programme for at most 6 years (see table below):

Degree Programme	**Minimum Years Allowed**	**Maximum Years to Graduate with Honours**
3 – Years	3 – Years	5 – Years
4 – Years	4 – Years	6 – Years
5 – Years	5 – Years	7 - Years

12. **Requirement for Graduation**

(i) To be recommended for any of the degrees of the University, a student must have accumulated not less than 150 units in the 5 years degree programme, 120 units in the 4 year programme and 90 units in the 3 year degree programme. In the case of transfer, students from other recognized Universities, a minimum of 60 units in course approved by the Faculty, must be accumulated by the student. No student who has not spent a minimum of two academic sessions shall qualify for the degree of the University. All Faculties shall work out the spread of courses in all programmes in their areas of jurisdiction.

(ii) The weighting system shall be as follows:

APPROVED SCORING AND GRADING SYSTEM

(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)
Vary according to contact hours assigned to each course per week, per semester and according to work student	70 – 100 60 – 69 50 – 59 45 – 49 0 – 44	A B C D F	5 4 3 2 0	Divide by multiplying I and IV and dividing by total credit units	4.50 – 5.00 3.50 – 4.49 2.50 – 3.49 1.50 – 2.49 1.00 – 1.49	First Class 2nd Class Upper 2nd Class Lower Third Class Fail

13. **Incomplete Grade**

A student shall be given incomplete grade symbolized by (Inc) if the lecturer did not finish the course or the student did not complete all the requirements for a particular course.

14. **Normal Progress**

A student shall be deemed to be making normal progress if he/she satisfies the requirements of his/her Faculty for the session at the appropriate levels. A normal progress shall mean that the student accumulates a minimum of 30 or 48 units per session depending on the Faculty.

15. **Carry-Overs**

(i) A student shall be made to remain in the University and carry-over the remaining required number of units for normal progress in accordance with the regulation prescribed by the Faculty and approved by Senate.

(ii) Students carrying over courses shall not be allowed to register for more than the approved maximum number of units for the session.

16. **Probation and Withdrawal**

(i) A student who makes a minimum GPA of 1.50 or more at the end of session will proceed to the next level of the degree programme for which he is registered.

(ii) A student whose CGPA is on the range of 1.00 and 1.49 at the end of one session will be on probation for the following session to enable him/her to improve on the GPA. During that session, he/she must register for the appropriate courses required and GST courses which he/she has the pre-requisites.

(iii) A student on probation during a session who makes a CGPA less that 1.00 during that session must withdraw from the degree programme for which he/she is registered.

17. **Custody of Confidential Documents**

The officer in-charge of the strong room in the Registry shall be responsible for the following:

(i) Custody of blank signed University certificates;

(ii) Issuance of certificates to graduates after they had been signed by the appropriate authorities;

(iii) Custody and issuance of examination answer scripts;

(iv) Custody of Department examination results/marks sheets duly signed by the Head of Department and the Examiner(s) respectively;

(v) Custody of academic gowns, and all other matters that are confidential in nature;

(vi) A copy of the examination results approved by Faculty Board of Examiners and signed by the Dean.

DEPARTMENT OF BOTANY STAFF LIST

ACADEMIC STAFF

NAME	QUALIFICATION	STATUS
Prof (Mrs.) O. M. Agbogidi	B. Ed., (Abraka) M.Sc., (Benin) PhD., Abraka	Professor (Plant Ecology/ Ecophysiology)
Prof (Mrs.) N. E. Edema	B.Sc., M.Sc., PhD., (Benin)	Professor (Environmental Plant Physiology)
Dr. (Mrs.) E. M. Ilondu	B.Sc. M.Sc. PGDE (Nigeria) Ex. Dip. in Computer Operations, PhD., (Abraka)	Ag. HOD/ Associate Professor (Crop Science/ Plant Pathology)
Dr. A.H. Erhenhi	B.Sc., M.Sc., (Benin) PhD., (Ekpoma)	Senior Lecturer (Plant Ecology)
(Mrs.) G. E. Obi-Iyeke	B.Sc., M.Sc., PhD (Nigeria)	Senior Lecturer (Plant Ecology/Ecotoxicology)
Mr. O.J. Ojoghoro	B.Sc. (Abraka), M.Sc. (Aberdeen)	Assistant Lecturer
Mr. W. O. Egboduku	B.Sc. (Abraka), M.Sc. (Benin)	Assistant Lecturer
Mr. O. E. Michael	B.Sc. (Abraka), M.Sc. (Lagos)	Graduate Assistant

LABORATORY STAFF

Miss Egbon-Nkeki Loveth Ngozi	Laboratory Technologist II
Miss Ezimadu Florence	Senior Laboratory Supervisor

ADMINISTRATIVE STAFF

Ujene Solomon	Chief Clerical Officer
Egbeji Gift	Chief Clerical Officer
Edakarabor Blessing	Head Messenger/Cleaner

CURRICULUM FOR B.Sc. BOTANY

100 LEVEL - FIRST SEMESTER

Course	Code	Course Title	Units/Status
BOT	101	Plant Diversity	2C
CHM	101	General Chemistry I	3C
MTH	101	Elementary Mathematics I (Algebra and Trigonometry)	3C
MTH	102	Elementary Mathematics II (Calculus)	3C
PHY	101	General Physics I (Mechanics, Thermal Physics and Waves)	3C
GST	101	Use of English and Library	4C
GST	102	Logic, Philosophy and Human Existence	2C
AEB	101	Principles of Animal Biology	3C
		Sub-total	**23**

100 LEVEL SECOND SEMESTER

Course	Code	Course Title	Units/Status
BOT	111	General Botany	3C
#BIO	112	General Biology Laboratory	3C
CHM	111	General Chemistry II	3C
#CHM	112	General Chemistry Laboratory	2C
PHY	111	General Physics II (Electricity, Magnetism and Modern Physics)	3C
#PHY	112	General Physics Laboratory	2C
GST	111	Nigerian Peoples and Culture	2C
GST	112	History and Philosophy of Science	2C
GST	113	Peace Studies and Conflicts Resolution	2C
		Sub-total	**22**
		TOTAL UNITS	**45**

SUMMARY

Core Courses - 45Units

Electives - 00Units

Grand Total - 45Units

#Course runs for 1st and 2nd Semester

B.SC (BOTANY)

200 LEVEL - FIRST SEMESTER

Course	Code	Course Title	Units/Status
BOT	201	Seedless Plants	2C
BOT	202	Flowering Plants, Forms and Functions	2C
BOT	203	Biotechnology	3C
BIO	203	General Physiology	2C
BIO	204	Biological Techniques	2C
MCB	101	Introductory Microbiology	3C
CSC	200	Introduction to Computer	2C
BOT	204	Horticulture	3E
CHM	203	Organic Chemistry	3E
		Sub-Total	**22**

200 LEVEL - SECOND SEMESTER

Course	Code	Course Title	Units/Status
BOT	211	Seed Plants	2C
BOT	212	Aquatic and Pollution Biology	2C
BIO	211	Biostatistics	3C
BIO	212	Introductory Ecology	2C
BIO	213	Genetics I	2C
BIO	214	Introduction to Molecular Biology	2C
BFC	210	Basic French Course	2C
CES	211	Entrepreneurship and Innovation	2C
AEB	211	Protochodates and Fishes	2E
		Sub-Total	**19**

SUMMARY

Core Course - 33Units

Elective - 08Units

Grand Total - 41Units

B.SC (BOTANY)

300 LEVEL - FIRST SEMESTER

Course	Code	Course Title	Units/Status
BOT	301	Plant Taxonomy	3C
BOT	302	Comparative Plant Anatomy	3C
BOT	303	Plant Physiology	3C
BOT	304	Mycology	3C
BOT	305	Paleobotany and Paleontology	2C
BOT	306	Plant Ecology	3C
BOT	307	Research Methods	3C
		Sub-Total	**35**

300 LEVEL - SECOND SEMESTEER

Course	Code	Course Title	Units/Status
SIWES	**BOT 399**	Industrial Attachment	15C

SUMMARY

Core Course - 35Units

Elective - 00Units

Grand Total - 35Units

B.Sc. (BOTANY)

400 LEVEL - FIRST SEMESTER

Course	Code	Course Title	Units/Status
BOT	401	Seminar	2C
BOT	402	Plant Breeding and Reproduction	3C
BOT	403	Economic Botany/Medicinal Plants	3C
BOT	404	Plant Virology	3C
BOT	405	Soil Science	3C
BOT	406	Plant Tissue Culture	3C
BOT	407	Molecular Biology	3C
BOT	408	Phytochemistry	2E
		Sub-Total	**22**

400 LEVEL - SECOND SEMESTER

Course	Code	Course Title	Units/Status
#BOT	410	Research Project	6C
BOT	411	Nigerian Vegetation	2C
BOT	412	Plant Pathology	3C
BOT	413	Plant Cytogenetics	3C
BIO	411	Conservation and Biodiversity	2C
CES	311	Entrepreneurship Studies (Business Creation and Growth)	2C
BOT	414	Plant Physiology II	3E
		Sub-Total	**21**

SUMMARY

Core Courses - 38Units

Electives - 05 Units

Grand Total - 43Units

#Course span 1 and 2 “semesters,

COURSE DESCRIPTION - B.Sc. (BOTANY)

BOT 101: Plant Diversity (2 units C)

Cell structure and organization functions of cellular organelles, diversity, characteristics and Classification of living things. General reproduction, Interrelationship of organisms, Heredity and evolution. Elements of ecology, types of habitat, evolutionary survey of the main plant groups (Algae, fungi, bryophytes, Gymnosperms and angiosperms with emphasis on their life cycles.)

BOT 111: General Botany (2 units C)

A generalized survey of the plant and animal kingdoms based mainly on the study of similarities and differences in external features, ecological adaptations of these forms. The general morphology, anatomy, histology and physiology of flowering plants, seed structure, dispersal and germination. Cellular basis of biological cell structure, distribution of genetic materials- mitosis and meosis. Hereditary variation and evolution.

BOT 201: Seedless Plants (3 Units C)

A systematic, evolutionary and phylogenetic treatment of the Fungi, Algae; Bryophytes and Pteridophytes with reference to their ecology and life cycles of the groups.

BOT 202: Flowering Plants form and Functions (2 Units C)

Study of the plant cell and its organelles, differences between plant and animal cell, Organization of the plant body, study of various cell types and tissues in plant bodies such as epidermal cells, cells of the ground tissue and their functions, cells of the vascular tissues and their functions, secretory cells and tissues in plants, primary and secondary growth in plants with specific reference to the function of vascular cambium and cork cambium, Anatomy of root stem and leaf.

BOT 203 Biotechnology (3 Units C)

Principles and applications in biotechnology. Genetically modified crops and techniques in biotechnology**.**

BOT 204 Horticulture (3Units E)

Plant propagation, nursery technique development and establishment. Transplanting, selected crops and ornamentals for horticulture. Landscaping and flower garden. Plant conservation and utilization.

Practical: Visits will be made to notable horticultural gardens of interest.

BIO 203 General Physiology (2 Units C)

Plant water relation, Photosynthesis, respiration, Growth and growth regulation, flowering dormancy, Seed germination and senescence; Physiological aspects of crop yield. Photosynthesis; CO_2 as a gaseous nutrient. Translocation; pathways and mechanisms of the process, hypothesis. Respiration; Glycolysis and Anaerobic pathway, Krebs cycle. Pentose shunt, respiratory enzymes. Measurement of respiration rate. Nitrogen Metabolism; N_2cycle. Symbiotic and non-symbiotic nitrogen fixation. Amino acid formation; Amines, proteins, alkaloids.

BIO 204 Biological Techniques (2 Units C)

Basic biological techniques and instruments including manometry, Spectrophotometry, chromatography, microscopy, preparation of temporary and permanent slides, the use of microtones, staining techniques, basic microbiology and sterile culture techniques, isotope (tracer) techniques, presentation and interpretation of Biological data, (**NOTE**: The extent of treatment of these techniques depends on the facilities available).

BOT 211: Seed Plants (3 Units C)

A survey of the evolution, morphology, ecology and economic importance of gymnosperms; a study of the major type of development of the embryo in gymnosperms and angiosperms (flowering plants), classification of gymnosperms and angiosperms, with named examples of gymnosperms; description of flowers in angiosperms; fertilization and fruit formation in angiosperms and classification of fruits.

BOT 212 Aquatic and Pollution Biology (2 Units C)

Types of aquatic habitats, water plants, man-made and natural bodies of water. Phytoplankton, macrophytes and wetland plants and their ecological functions.

BIO 211: Biostatistics (3 Units C)

Use of statistical methods in biology; populations and samples, frequency distribution, statistics of central tendency, law of probability; probability distribution; normal; poison and binomial distribution; mean; standard error; standard deviation, curve fitting; Chi test; student test; student test; F-distribution, regression; Correlation coefficient, analysis of variance; estimation and test of Hypothesis, design of simple agricultural and biological experiments, some non- parametric tests.

BIO 212: Introductory Ecology (2 Units C)

The ecosystem approach to the study of ecology; flow and nutrient cycling of populations and communities in the ecosystem; food chains and food webs, and trophies levels; interactions between plants and animals, influence of man; productivity in aquatic and terrestrial ecosystems; ecological groups; hydrophytes, halophytes, xerophytes, epiphytes, aerophytes and mesophytes.

BIO 213: Genetics I (2 Units C)

Heritable and non-heritable characteristics, principles governing the Transmission of hereditary factors from parents to offspring, and in a population; quantitative inheritance; variation in genome structure; sex determination; introduction to population genetics.

BIO 214: Introduction to Molecular Biology (2 Units C)

Macromolecules and Cells, Nucleus and Cell Cycles, DNA and RNA. Their duplication and modification, Genetic code, Gene Expression, Protein Synthesis, Function and Structure.

BOT 301: Plant Taxonomy (3 Units C)

Taxonomy and its significance, principles, concepts of plant taxonomy. Construction and use of taxonomic keys. Experimental taxonomy with special emphasis of cyto-taxonomy and chematoxonomy. Sources of taxonomic data and methods of analysis. Floral morphology and evolution of floral structures, principles and practice of flowering plant taxonomy, with emphasis on the Phylogenetic relationship and evolutionary features in classification; detailed study of selected, locally important families; identification keys; herbarium techniques.

BOT 302: Comparative Plant Anatomy (3 Units C)

Origin, structure and chemical composition of plant cell walls, Characteristics and classification of tissues and tissue systems, organization of meristems; evolution of vascular tissues, tissue and organ differentiation; development of lateral organs, anomalous growth, comparative study of gymnosperm and angiosperm woods, anatomical adaptations to specialized ecological habitats applied aspects of plant anatomy.

BOT 303: Plant Physiology (3 Units C)

Photosynthesis; CO_2 as a gaseous nutrient. Photosynthestic apparatus and light absorption. Fundamental nature of light as absorbable energy, carbon pathways including the Calvin cyclce, C_3, C_4 and CAM (Crassulacean Acid Metabolism) pathways. The role of growth regulators and phytohormones (auxins, gibberelenins, cytokinins, ethylene and absciscic acid) in plant growth and development phenomena; such as abscission, apical dominance, tropisms, nastic movements, dormancy. Physiology of flowering including the role of phytochromes in photoperiodism, reproductive and vegetative photoperiodism, vernalization

BOT 304: Mycology (3 Units C)

Morphology, structure, organization, taxonomy and ecology of the fungi (Phycomycetes, Ascomycetes, Basidiomycetes, and Deuteromycetes); reproduction and life cycles of the main groups, Fungal interactions with other organisms, mycorhizae, lichens and their importance. Structures, life cycles, Physiology and Classification of fungi. Fungi of economic importance. Metabolites of Fungi. Industrial uses of fungi. Fungi in Medicine

BOT 305 Paleobotany and Paleontology (2 Units C)

Morphology and Classification of Spurs and Pollens; their strategraphic and pale environment application. Study of fossils. Oil implication of fossils. Fossil records, Evolutionary trends in plants, Theories of organic evolution, stages and periods of evolution.

BOT 306: Plant Ecology (3 Units C)

Study of various plant communities and their ecological framework; Nigerian vegetation, desert and semi-desert plant productivity. Modern concepts in ecology.
Pre-requisites – BIO 212

BOT 307 Research Methods (3 Unit C)

Experimental design and research methods in Botany. Techniques and procedure in experimentation of research data. Presentation of Research findings in narrative and standard statistical methods, precision and accuracy of research reports.

BOT 399 Industrial Attachment (15 Units C)

The course is designed to expose the students to the practical aspects of botany. It involves attachment to Research Institutes, Petroleum, Agricultural, and Industrial establishments for 6 weeks during the Long vacation. The aim is to make students understudy the scientists. Working in the relevant areas and expose them to the latest equipment and methods used in the relevant areas of research. Students will be required to presented and submit a written report for assessment by the Department.

BOT 401: Seminar (2 Units C)

A critical review of the literature in an area of the student's interest is presented before an audience of staff and final year students of the Department. The course is aimed at grooming the students on the Preparation and delivery of seminar papers. The assessment of Performance is based on content, bibliography and technique of Referencing, style and effectiveness of delivery, the ability to discuss and answer questions. The assessment is carried out by a panel constituted by the Department and to which the corrected seminar paper is submitted soon after the delivery.

BOT 402: Plant Breeding and Reproduction (3 Units C)

The objectives of plant breeding, origin and domestication of basis of breeding. Self pollinated and cross pollinate crops. Breeding methods, pure line and mass selection, pedigree method, bulk population breeding, back cross breeding. Recurrent selection, heterosis, chromosome implication.

BOT 403: Economic Botany and Medicinal Plants (2 Units C)

Description, identification and classification of medicinal plants. Preparation of extracts from various organs of plants. Gathering of ethnomedical information. Collection and preservation of medicinal plant. The origin, history, sources, taxonomy, morphology, ecology and uses of the economic plants of West Africa. Few samples which many vary from year to year are to be chosen from all groups of plants serving various purposes e.g. food, fibre, medicines timber, cereals. Forage, essential oils and perfumes, beverages, etc. Medicinal plants of different ecological zones, ethnobotany, sociobiology.

BOT 404: Plant Virology (3 Units C)

General characteristics of plant bacterial viruses. Viral multiplication selected viral diseases in plants. Survey of plant viruses with reference to their properties, structure, transmission, infection, multiplication, movement, variability, quantitative assays, purification and serology; symptomatology of Virus diseases and environmental influences, interference, synergism and acquired immunity, studies of selected Virus diseases and methods of controlling them, bacterial viruses.

BOT 405: Soil Sciences (2 Units C)

Classification and characteristics of soils. Chemical components and analysis of soils and plant tissue. Plant, soil water relationships. Evolution of pedagogical thought, introduction to soil terminology, soil as a dynamic medium; soil water, nutrients, profile, plants, animals, chemical components and analysis of soil.

BOT 406: Plant Tissue Culture (3 Units C)

Meristem culture, organ cultivation, embryo culture. The role of plant hormones and vitamins. Techniques of plant tissue culture. Application of plant tissue culture in plant breeding

BOT 407: Molecular Biology (3 Units C)

Evaluation of plant genetics resources; advanced topics in evolution of fossil biology; genetic engineering; of biology and global politics of GM. Foods; ecology and weed science; urbanization and environmental pollution

BOT 408: Phytochemistry (2 Units E)

Structure and function of plant cell, including general morphology of plant cell, and isolation of cellular components; plant cell wall, including chemistry and physical composition as well as the biosynthesis of the cell wall: carbohydrate biosynthesis and lipid metabolism; nitrogen fixation; purines and pyrimidines, nucleic acids, protein synthesis and amino acid biosynthesis, nature and distribution of terpenesand terpenoids; chlorophylls and hemes; nature and distribution of plant alkaloids; nature and distribution of plant phenolics.

Pre-requisite BOT 303

BOT 410: Research Project (6 Units C)

An original investigation carried out under the supervision of a Specialist (in their relevant area) appointed by the department. The Course is aimed at inculcating in the students the investigative approach to science. Emphasis is placed on advancing a hypothesis, experimental planning, data presentation, and validity of conclusion in the light of data presented. The project is to be written up in the form of a scientific report. Three copies of the typed and bound report will be required and submitted before the beginning of second semester examinations

BOT 411: Nigerian Vegetation (3 Units C)

A study of Nigerian forests, savannah grass lands and special emphasis on arid zones. Description and classification of vegetation, types of vegetation in West Africa, Nigerian vegetation; desert and semi-desert, plant productivity; quantitative method for the study of vegetation. Vegetation dynamics; autecology, synecology, (course to include a Short autecology project).Effects of physical environment on plants; climatic, biotic and topographic factors. Biomes of Nigerian, Biomes of West African, Africa and the rest of the World .Influences of man on the natural ecosystem/Anthropogenic. Environmental degradation, sustainable management of natural resources, vegetation Dynamics, Primary Productivity, Green economy, Litter fall, variability and ecological benefits.

BOT 412: Plant Pathology (3 Units C)

Principles and concepts of plant pathology. The concept of disease, infection, pathogenesis host-pathogen relationship and methods and theory of biological and chemotheraphy. Techniques of plant pathology, principles and practice of plant pathology; plant infection, agents of disease, types of plant disease, nematodes diagnostic features and recognition of plant diseases. Plant disease control, quarantine practices, breeding for résistance; structure and action of fungicides, resistance mechanism, pre-resistance, post-harvest disease of economically important crops host-parasitic- relationship, diseases of major economic crops of Nigeria and the world, and their control.

BOT 413: Plant Cytogenetics (3 Units C)

Morphology and behaviour of Chromosomes, Chromosomal Aberrations and Polyploidy importance of polyploidy, Population cytogenetics. Examples with reference to specific individuals.

BOT 414: Plant Physiology II (3 Units E)

Principles of plant response to environment including saturation and limiting factors ; outline of plant adaptations to radiation environment; effects of sun flecks and under storey plants. Ecotypes and the role of genetics. The nature of stress, critical roles of membranes and heat shock proteins produced in a response to various stresses; water stress, drought, cold and salt ; mechanisms of plant response to stresses; chilling injury; high temperature stress; acidic soils; other stresses.

BIO 411: Conservation (2 Units C)

Meaning and types of resources; renewable and non-renewable Resources; principles of conservation; conservation and management of wildlife, soil, forest, aim, water and mineral resources. Environmental pollution: types, causes, effects and control, contemporary environmental issues.