

HISTORY OF THE DEPARTMENT OF CROP AND SOIL SCIENCE

The Department of Crop and Soil Science is one of the Departments in the Faculty of Agriculture, created at the onset of the Faculty of Agriculture in 2005. The Department has three options namely, Crop Production, Crop Protection and Soil Science. Courses are taught towards the award of a single degree - Bachelor of Agriculture (B. Agric), with emphasis on the options stated above, and this is reflected in the curriculum for each of the options. In addition the Department provides services to the Department of Geography and Environmental Studies in the Faculty of Social Sciences and the Agricultural Programmes of the Faculty of Education.

The first set of students, 22 in number, was admitted through the University's Remedial (Basic) Programme. and the first set of graduates was due at the end of the 2009/2010 session. The Department now has a total enrolment of 156 students.

At the onset, the Department had five academic staff, most of who were inherited from the Institute of Agricultural Research and Development of the University. Now the academic staff strength has grown to 36 out of which seven are Professors. Professor M.I. Godwin-Egeinwas the pioneering Head of Department from 2005 to 2010. Dr BabatundeNuga succeeded him as acting Head of Department from 2010 to 2012. Prof. E.C. Wokoma headed the department from 2012-2013. Her tenure was brought to an abrupt end after one year when she became the dean of the faculty and Dr A.O. Asimiea took over from 2013-2015.

As a peculiar and major contribution to the hands-on (AGF courses) of the Faculty, the Department runs a viable Mushroom Unit where students and farmers are trained in mushroom production. The Department enjoys the neighbourliness of the Faculties of Science and Management Sciences and is still enjoying those of some

Engineering Departments and the Faculty of Education in Choba Park of the University.

Vision

The Department of Crop and Soil Science is one of the departments of the Faculty of Agriculture that is designed to give a broad based undergraduate training in Agriculture especially as it relates to the aspect of Crop and Soil Science.

Philosophy

The philosophy of the programme is to train students with broad-based skills and capacity to utilize scientific knowledge in developing practical solutions to the problems of agriculture and the related activities particularly in the Niger Delta environment.

Mission

Our mission is to contribute to national enlightenment and agricultural development, self-reliance and unity through the advancement and propagation of scientific knowledge and to utilize same for service to community and humanity.

Objectives

The objectives of the department are to produce graduates of agriculture that will be able to accomplish the following:

- a. Engage in production and research that would provide relevant and appropriate solutions to the country's agricultural and rural development problems as it relates to the elements of crop/soil and also to improve agricultural productivity in general;
- b. Take up employment anywhere in Nigeria in any aspect of Crop and Soil Science and related areas;
- c. To advance knowledge in Crop Production, Protection and Soil Management techniques in order to enhance their skills and expertise required for expertise and self-reliance and gainful employment;

- d. To train students in improved crop production techniques which will enable them provide services to farmers;
- e. To build capacity of the students to be able to conduct research in areas of fertility and Intergrated Pest/Disease Management;
- f. To establish linkages with national and international agricultural and other related institutionsfor Research and Development;
- g. To enable the students to acquire knowledge through broad-based training to meet the Minimum Academic Standards (MAS) for Agriculture required by the National Universities Commission (NUC), thereby making our graduates competitive in various ventures;
- h. Profitably put their skills into practice by establishing and operating their own farming enterprises; and
- i. To harness all the above to specifically solve crop production problems of the peculiar ecology of the Niger Delta.

STAFF LIST

S/N	Name	Qualifications	Specialization	Designation
1.	Dr. U. E. Udensi	<i>BSc.Botany (UPH), MSc. Agronomy-Weed Science (Ibadan). PGD. Agric. Dev.(Wye, London), PhD. Weed-Crop Ecology. (Ibadan)</i>	Crop Protection (Weed /Crop Ecology)	Senior Lecturer and Ag. HOD JAN 22, 2016 TO DATE
2	Prof. N.E.S. Lale	<i>B.Sc. Agric. (Unimaid) PhD Entomology (Newcastle upon Tyne, U.K)</i>	Agricultural Entomology	Professor (Dean 2005-2012)
3	Prof. N.A.A. Okereke COREN, MNSE, MNIAE, MBSIE,	<i>BEng. (UNN) M.Eng(UNN) D.Ir.E.(Catholic University of Leuven, Belgium) PhD. Soil and water Engineering (FUTO)</i>	Soil & Water/ Bio-resources Engineering	Professor Adjunct
4	Prof. J. M. Ayotamuno	<i>B.Sc, Agric. Engineering (UNIMAID). MSc, Agric. Engineering (Ibadan). PhD, Soil & Water Engineering (RSUST). PhD, Civil Eng.-Geoenvironmenta (University of Birmigham, UK)</i>	Agricultural Engineering	Professor Adjunct
5	Prof. Dominic Aja Okpara	<i>B.Sc (UPH), M.Sc. Crop Science (UNN); PhD. Field Crop Production (UNN)</i>	Field Crop Production	Professor
6	Prof. (Mrs). E. C. Wokoma	<i>BSc Ed/Biology(Zaria) M.S. Plant Pathology (Wash. State),Ph.D Plant Pathology(Ohio State)</i>	Crop Protection (Plant pathology)	Professor(Ag. HOD (2012-2013). Dean (2014-2016)
7	Prof. M. I. Godwin-Egein	<i>B.Ed.Biol Educational Mgt and Planning(UPH), MSc. Plant Pathology(UPH) and Mycology, PhD. Plant Science and Biotechnology (UPH)</i>	Crop Protection (Plant Pathology & Mycology)	Professor (Ag. HOD 2005 - 2010)
8	Dr. B. O. Nuga	<i>B.Sc. Agric-Soil Science (Ibadan), M.Sc.Agronomy-Soil Science (Ibadan, PhD. Agronomy-Soil Science (Ibadan)</i>	Soil Survey & Land Use Management	Associate Professor (Ag. HOD 2010-2012)
9	Dr. D. F. Uwah	<i>B.Sc. Agric. (Calabar), MSc. Crop Sci. (UI) PhD. Agronomy (ABU Zaria)</i>	Agronomy	Associate Professor

10.	Dr. C. Wariboko	<i>B.Sc. Agronomy (Wisconsin-Madison), M.Sc. Agronomy (Plant Breeding) Alabama A&M Normal Alabama)1978; PhD. (Agronomy /Plant Breeding) Arkansas-Fayetteville</i>	Agronomy and Plant breeding	Associate Professor
11	Dr. (Mrs). E. I. Hamadina	<i>BSc.CropSc,(RSUST) M.Sc.Environmental Biology-Physiology, (Ibadan), PhD.Physiology,(READING)</i>	Crop Physiology	Senior Lecturer
12	Dr. A.O. Asimiea	<i>B.Sc.Zoology,(UPH), M.Sc.(Hydrobiology/Fisheries, (UPH), MSc.Nematology(UGent), PhD.Environmental Management (RSUST)</i>	Crop Protection (Nematology)	Senior Lecturer (Ag. HOD) 2014 to JAN, 2016.
13	Mr. B.B. Dumpe	<i>B.Sc. Microbiology. M.Sc. Food Microbiology(Uniport, Nigeria)</i>	Crop Protection (Microbiology)	Research Fellow I
14	Dr.O.J.Kamalu	<i>HND.Agronomy 1983 MPhil Soil Science 1989 (RSUST) PhD. 2016 (RSUST)</i>	Pedology & Land Use	Lecturer I
15	Dr. (Mrs) O. M. Adedokun	<i>BSc. Botany (UNILAG), MSc. Agronomy (Ibadan), PhD. Mycology and Plant Pathology (UPH)</i>	Mycology	Senior Lecturer
16	Dr. A.A. Tanimola	<i>BSc. Agriculture- Crop Protection and Environmental Biology, (Ibadan) MSc. CPEB (Ibadan). PhD Plant Nematology</i>	Crop Protection (Nematology)	Senior Lecturer
17	Dr. A. A. Efisue	<i>BSc. Crop Science (Ibadan), MSc. Plant Breeding(Ibadan), PhD. Plant Breeding(UKZN, South Africa)</i>	Plant Breeding	Senior Lecturer
18	Dr. C.C. Wokocha	<i>BTech.Geography (Minna), MSc. Soil Science.(UMUDIKE) PhD. Soil Survey and land use Planning (FUTO)</i>	Soil Science (Soil Survey)	Senior Lecturer

19	Dr. U. Zakka	<i>NCE.Agricultural Science(College of Edu.Maiduguri), BSc. Agric Hons.(UNIMAI) MPhil. Entomology(University of Ghana Legon) PhD Entomology (Uniport., Nigeria)</i>	Crop Protection (Entomology)	Senior Lecturer
20	Mr. H. E. Kalio	<i>OND Agriculture, HND Food Tech. (Humberside University, England) M.Sc. Agric Engineering (Cranfield University, England)</i>	Food Processing	Lecturer II
21	Dr. S. Omovbude	<i>BSc. Botany (BENSU), MSc. Agronomy-Crop Science (EDSU), PhD. Weed Science (AAU)</i>	Weed Science	Lecturer I
22	Dr. V.C. Okereke	<i>B. Agric. Crop Science (UMUDIKE) MSc. Plant Pathology(UMUDIKE) PhD (READING).</i>	Crop Protection (Mycology/ Virology)	Lecturer I
23	Dr. B.E. Udom	<i>HND. Soil Fertility (Jos), PGD. Soil & Water Resource Mgt (UNN), MSc. Soil Physics and Conservation (UNN), PhD. Soil Physics and Conservation (UNN)</i>	Soil Science (Soil Physics /Conservation)	Lecturer I
24	Dr.J.A. Orluchukwu	<i>BSc. Crop Science (RSUST) MSc. Crop Science(RSUST), PhD. Plant Breeding (RSUST)</i>	Crop Production (Agronomy)	Lecturer I
25	Dr. J. A. Chukwumati	<i>BSc. Soil Sci. (RSUST), MSc. Soil Conservation & Fertility (Wye College Univ. of London, UK) PhD. Soil Chemistry and Environmental Science 2013(RSUST)</i>	Soil Science (Soil Chemistry)	Lecturer I
26	Dr. L. C. Nwosu	<i>B.Sc. , M.Sc. PhD Entomology</i>		
27	Dr. O. M. Owolabi	<i>B.Agric. M. Sc (Benin),PhD Etomology (FUNAAB)</i>		
28	Mr.V.C. Wabali	<i>BSc.Food Science & Tech,(RSUST), M.Sc (Food Science & Tech, (Ibadan), MBA.</i>	Food Science & Technology	Lecturer I

		<i>Business Admin. (UNICAL)</i>		
29	Mr. S. R. Atijegbe	<i>BSc(Hons.). Crop Science (UNIMAID),MPhil. Entomology (GHANA LEGON)</i>	Entomology	Lecturer II
30	Mr. P. O. Abam	<i>B.Agric. Soil Science (UNICAL), MSc.Soil Science (Umudike)</i>	Soil Chemistry	Lecturer II
31	Mrs. A. O. Nengi-Benwari	<i>BSc. Agric-Soil Sc. (UNICAL), MSc. Soil Environmental Mgt (RSUST)</i>	Soil Microbiology	Lecturer II
32	Mr. H. I. Anozie	<i>B. Agric Tech (FUTO)MSc. Agronomy Soil Science option (UI)</i>	Soil Science	Assistant Lecturer
33	Mr. M.E. Ikiriko	<i>B. Agric., Soil Science. (UPH) M. Agric Agronomy (Soil Science) (UI)</i>		Graduate Assistant
34	E.B. Oton	<i>B. Agric. Crop Protection (UPH) M. Agric (University of Reading, UK)</i>		Assistant Lecturer
35	Mrs. K. A. S. Rapheal-Amadi	<i>B. Agric., Soil Science.(UPH) M. Agric. Agronomy (Soil Science) (UI)</i>		Graduate Assistant
36	Mr. T.B. Solomon	<i>B. Agric., Crop Production.</i>		Graduate Assistant
ADMINISTRATIVE STAFF				
1	Mrs. NkechiAgbidi	<i>BSc., WAEC, NECO; FSLC</i>	General administration	Higher Executive Officer
2	F.N. Alagoa	NABTEB BSc. C. COMPT	Perform all secretarial duties in the department	Secretary
3	Mrs J. Igwe	OND, GCE	Perform all secretarial duties in the Department	Confidential Secretary

4	Mrs. Gloria N. Walison	WAEC, FSLC	Receiving and recording of mails, filing of Documents	Senior Clerical Officer
5	Ms. N.B. Ben-Wali	NECO, FSLC	Typing all Documents in the Department	Computer operator
6	Mrs. Blessing Wosu	FSLC	Cleans the offices and environments	Caretaker
5	Mr. Obulor Samson	<i>FSLC</i>	Received and dispatch mails. Cleans the offices and environment. And other duties assigned	Caretaker
6	Mrs W. F. Okechukwu	<i>FSLC</i>	Cleans the offices and environments.	Cleaner/Messenger

LABORATORY STAFF

s/n	Name	Qualification	Responsibility	Designation
1.	Mr. Philip Sana	<i>HND NIST 1989</i>		Chief Technologist
2	Mr. Uchenna Anusionwu	<i>HND. (Federal Polytechnic, Nekede), Association of Medical Laboratory Sc. (UPTH)</i>	Organize and conduct all practical exercises, Care and maintenance of laboratory equipments. Assist student in research projects,	Senior Technologist

3.	Johnson Cyril Ndah	<i>WAEC 2002</i>		Laboratory Assistant
4.	Mrs. Ngozi Chuku-Oba			Laboratory Assistant
5.	Mrs. Grace Asobinuowu	<i>NECO 2000</i>		Head Laboratory Attendant
6.	Innocent Wofuru	<i>WAEC 2001, NECO 2004</i>		Head Laboratory Attendant
TECHNICAL STAFF				
1	Mr. E. O. Parmenas	<i>NCE. Agric. Education (College of Ed , Ekiadolor)</i>	supervision of farm activities, sales of farm produce, assist Lecturers & students in field Projects	Assistant Farm Superintendent
2	Mr. I. Emmanuel	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
3	Mr. N. G. Bariyima	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
4	Mr A. Shedrack	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
5	Mr. N. Zorbari	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
6	Mr. A. F. Precious	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants

7	Mr. C. James	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
8	Mr. D. Sunday	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
9	Ms. N. Josephine	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
10	Ms. D. Theresa	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
11	Mr. B. Ledum	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
12	Ms. A. Justina	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
13	Ms. J. Martha	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
14	Mr. L. Cletus	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
15	Ms. W. Nnenda	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
16	Ms. A. Ngozi	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants

17	Ms. A. Happiness	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
18	Ms. A. Faith	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants
19	Mr. O.Gonee	<i>FSLC</i>	Engage in Pre and Post-Harvest activities	Farm assistants

100 LEVEL (YEAR 1) FACULTY WIDE-COURSES FOR ALL DEPARTMENTS

FIRST SEMESTER							
s/n	Course Codes	Course Titles	Credit Units	s/n	Course Codes	Course Titles	Credit Units
I	GES 100.1	Communication Skills in English	3	I	GES 103.2	Nigerian People and Culture	2
II	FSB 101.1	General Biology I	3	II	FSB 102.2	General Biology II	3
III	CHM 130.1	General Chemistry I	3	III	CHM 131.2	General Chemistry II	3
IV	PHY 101.1	Mechanics and Properties of Matter	3	IV	CHM 132.2	Introduction to Principles of organic Chemistry	3
V	MTH 120.1	Calculus	3	V	PHY 115.2	Heat, Light and Sound	2
VI	GES 102.1	Introduction to Logic and Philosophy	2	VI	GES 101.2	Computer Appreciation and Application	2
VII	MTH 110.1	Elementary Algebra and Sets	2	VII	AGR 101.2	Introductory Statistics For Agriculture	2
VIII	PHY 102.1	Physics Practical	1				
	TOTAL		20				17

Total units = 37

200 LEVEL (YEAR 2) FACULTY WIDE- COURSES FOR ALL DEPARTMENTS)

FIRST SEMESTER				SECOND SEMESTER			
s/n	Course Codes	Course Title	Credit Units	s/n	Course Code	Course Titles	Credit Units
I	AGR 201.1	General Agriculture	2	I	AGR 205.2	Agro- Climatology and Meteorology	2
II	CPS 201.1	Crop Anatomy, Taxonomy and Physiology	2	II	CPS 202.2	Principles of Crop Production	2
III	AGE 201.1	Principles of Agricultural Economics	2	III	ANS 201.2	Anatomy and Physiology of Farm Animals	2
IV	FWL 201.1	Introduction to Forestry and Wildlife Management	2	IV	ANS 202.2	Principles of Animal Production	2
V	AGR 2C1.1	Community Service	1	V	FSH 201.2	Introduction to Fisheries	2
VI	AGX 201.1	Introduction to Agricultural Extension and Rural Sociology	2	VI	AGR 206.2	Principles of Food Science and Technology	2
VII	AGR 202.1	Introduction to Farm Power and Machinery	2	VII	AGF 201.2	Farm Practice	2
VIII	SOS 201.1	Introduction to Soil Science	2	VIII	AGR 207.2	Introduction to Home Economics	2
IX	AGR 203.1	Introduction to Agric. Microbiology	2				
X	AGR 204.1	Computer Application to Agriculture	2				
	Total		19				16

Total units = 35

300 LEVEL (YEAR 3) COURSES-FACULTY WIDE-

FIRST SEMESTER				SECOND SEMESTER			
s/n	Course Codes	Course Titles	Credit Units	s/n	Course Codes	Course Titles	Credit Units
I	ANS 301.1	Animal Health and Diseases	2	I	ANS 303.2	Ruminant Animal Production	2
II	ANS 302.1	Non-Ruminant Animal Production	2	II	ANS 304.2	Animal Genetics and Breeding	2
III	CPS 301.1	Arable Crop Production	2	III	SOS 302.2	Soil Chemistry I	2
IV	SOS 301.1	Pedology and Soil Physics	2	IV	AGX 301.2	Extension Teaching, Learning Methods and Processes	2
V	CPP 302.1	Introduction to Entomology	2	V	CPS 303.2	Permanent Crops	2
VI	AGE 301.1	Introduction to Farm Management	2	VI	AGR 303.2	Agricultural Biochemistry	2
VII	AGE 302.1	Introduction to Mathematical Economics for Agriculture	2	VII	GES 300.2	Fundamentals of Entrepreneurship	2
VIII	AGR 301.1	Introduction to Remote Sensing	2	VIII	CPS 304.2	Crop Genetics and Breeding	2
IX	AGE 303.1	Economic Analysis	2	IX	CPP 305.2	Introduction to Phytopathogens and Weed science	2
X	AGR 302.1	Agricultural Research and Report Writing	2	X	AGF 301.2	Field Course	1
	TOTAL		20				19

Total units = 39

400 LEVEL (PRACTICAL YEAR) SIWES

Course codes	s/n	Course Title	Credit Units
I	ANS 401	Non-Ruminant Animal & Micro-Livestock Production	3
II	ANS 402	Ruminant Animal Production	3
III	ANS 403	Animal Health Management	2
IV	AGE 402	Farm Management and Accounting	3
V	AGX 420	Extension Practices	3
VI	CPS 401	Crop Production Techniques	3
VII	CPS 402	Principles and Practices of Crop Protection	2
VIII	CPS 403	Mushroom Production Techniques	1
IX	SOS 401	Farm Design, Farm Survey and Land Use Planning	2
X	SOS 402	Soil Fertility, Plant Nutrition and Laboratory Analysis	2
XI	AGR 401	Agricultural Mechanisation and Workshop Practices	2
XII	AGR 400	Report Writing and Presentation	4
XIII		GES 400 Entrepreneurship project	2
Total			32

Total units = 32

**500 LEVEL (YEAR FIVE) COURSES
CROP PROTECTION OPTION**

FIRST SEMESTER				SECOND SEMESTER			
s/n	Course Code	Course Title	Unit	s/n	Course Code	Course Title	Unit
I	CPP 501.1	Weed Science	2	I	CPP 500.2	Seminar	1
II	CPP 502.1	Crop Pathology	2	II	CPP 506.2	Pesticides and their application	2
III	CPP 503.1	Pest Ecology	2	III	CPP 507.2	Agricultural Entomology	2
IV	CPP 504.1	Applied Nematology	2	IV	CPP 508.2	Crop Disease Control	2
V	CPP 505.1	Intergrated Pest Management	2	V	CPP 509.2	Pests of Stored Products	2
VI	AGR 501.1	Experimental Techniques	2	VI	CPS 516.2	Post – Harvest Physiology and Product Storage	2
VII	AGR 502.1	Advances in Agriculture	2	VII	SOS 511.2	Irrigation and Drainage	2
VIII	CPS 512.1	Farming Systems	2	VIII	CPP 599.2	Research Project	
IX	SOS 507.1	Soil and Plant Analysis	2				
X	SOS 504.1	Soil Fertility and Plant Nutrition	2				
TOTAL			20				19

Total units = 39

CROP PRODUCTION OPTION

FIRST SEMESTER				SECOND SEMESTER			
s/n	Course Code	Course Title	Unit	s/n	Course Code	Course Title	Unit
I	CPS 510.1	Forage and Fodder Crop Production	2	I	CPS 500.2	Seminar	2
II	CPS 512.1	Farming Systems	2	II	CPS 516.2	Post – Harvest Physiology and Product Storage	2
III	CPS 513.1	Plant Breeding and Seed Production	2	III	CPS 518.2	Agronomy of Neglected Plants	2
IV	CPS 514.1	Floriculture and Land Scaping	2	IV	CPP 506.2	Pesticides and their application	2
V	CPS 515.1	Crop Physiology	3	V	CPS 517.2	Vegetable Crop Production	2
VI	CPP 501.1	Weed Science	2	VI	SOS 511.2	Irrigation and Drainage	2
VII	AGR 501.1	Experimental Techniques	2	VII	SOS 509.2	Fertilizers and their Uses	2
VIII	AGR 502.1	Advances in Agriculture	2	VIII	CPS 599.2	Research Project	6
IX	SOS 504.1	Soil Fertility and Plant Nutrition	2				
X	SOS 507.1	Soil and Plant Analysis	2				
TOTAL			20				19

Total units = 39

SOIL SCIENCE OPTION

FIRST SEMESTER				SECOND SEMESTER			
s/n	Course Code	Course Title	Unit	s/n	Course Code	Course Title	Unit
I	SOS 501.1	Soil Chemistry II	2	I	SOS 500.2	Seminar	1
II	SOS 502.1	Soil Physics	2	II	SOS 508.2	Soil Classification	2
III	SOS 503.1	Soil water and Plant relations	2	III	SOS 509.2	Fertilizers and their uses	2
IV	SOS 504.1	Soil Fertility and Plant Nutrition	2	IV	SOS 510.2	Remote sensing and GIS	2
V	SOS 505.1	Soil Microbiology	2	V	SOS 511.2	Irrigation and Drainage	2
VI	SOS 506.1	Soil Survey and Land Scaping	2	VI	SOS 512.2	Soil Conservation and Remediation	6
VII	SOS 507.1	Soil and Plant Analysis	2	VII	CPP 506.2	Pesticides and their application	2
VIII	AGR 501.1	Experimental Techniques	2	VIII	CPP 506.2	Research project	2
IX	CPS 512.1	Farming systems	2				
X	AGR 502.1	Advances in Agriculture	2				
Total			20				19

Total units =39

SUMMARY OF TOTAL CREDIT UNITS

Crop protection option 177; Crop production option 178; Soil Sci. option 182

YEAR ONE (FIRST SEMESTER)

GES 100.1 Communication Skills in English (3 units)

Study/library skills and methods: methods for taking and making notes; techniques for organizing study time; study methods and coping with examinations; Library skills and location of library materials. Listening skills: skills for effective listening comprehension. Basic skills in understanding lectures, dialogue or conversation. Identifying/understanding relevant Language Points in the discourse. Making notes/summaries of lectures. Decoding texts/information, vocabulary, *inference* and meaning, understanding grammar, usage, and style. Reading skills: Importance of Reading; reading as study technique. Kinds of reading: speed reading, skimming, scanning, intensive, extensive, reading for evaluation. Understanding text organization. Reading comprehension: SQ3R method. Reading and developing Vocabulary. Using grammar in Reading and Writing. The Hierarchy: Words and their classes, phrases/clauses. Level of the sentence: English as a SVOCA language. Vocabulary, using the dictionary and word relationships: polysemy, antonym, synonyms, homonyms, homophones, denotation/connotation, collocational patterns: affixation, suffixation, etc. Writing and Speaking Skills.

FSB 101.1 General Biology I (3 units)

Characteristics of life. Investigation in biology. The scientific substance of life; the unit of life (including methods of study); activities of cells; the control of metabolic activities, cell division. Basic principles of inheritance.

CHM 130.1 General Chemistry I (3 units)

Introduction to chemistry; matter, energy, measurement, significant figures; dimensional analysis. State and classification of matter, mixtures, compounds and elements. Atomic theory and molecular structure. Atoms, molecules, ions, periodic table,

inorganic nomenclature. Equations, types of reactions, atomic and molecular weights, the mole. Empirical formulae, stoichiometry limiting reagent, molarity, titration. Energy, enthalpy, Hess's law, standard heat of formation, calorimetry. Size of atoms, patterns on periodic table. Chemical bonding, valence, electrons, ionic bonding and size of ions, covalent bonding, and Lewis structures, resonances forms, bond energies, polarities. Hydrogen bonding in solids. Types of solution, concentrations, solution process, T and P effects, reactions in aqueous solutions, colligative properties

PHY 101.1 Mechanics and Properties of Matter (3 units)

Topics covered in this course will include the following: motion in one dimension in a plane, work and energy, conservation laws, oscillation, solid friction, rotational kinematics and rotational dynamics, equilibrium of rigid bodies, gravitation, Galilean invariance, surface tension, elasticity and viscosity.

MTH 120.1 Calculus (3 units)

Function of a real variable, graphs, limits and idea of continuity. The derivative as limit of rate of change. Techniques of differentiation. Extreme curve sketching, integration as an inverse of differentiation. Methods of integration. Definite integrals. Application to areas, volumes.

GES102.1 Introduction to Logic and Philosophy (2units)

Symbolic logic, special symbols in symbolic logic; conjunction, negation, affirmation, disjunction, equivalence and conditional statement; the laws of thought; the method of deduction using rules of inference and bi-conditionals and quantification theory.

MTH 110.1 Elementary Algebra and Sets (2units)

Algebra and Trigonometry; Real number system, Real sequences and series: sets and sub sets; unit intersection, complements, empty and universal sets, Venn diagram; one way correspondence

between sets; quadratic functions and equations; solution of linear equation, simple properties of determinants; indices and binomial theorem; transformations e.g. Log transformation equation of the straight line and application to simple regression equation; permutations and combinations; circular measure, trigonometric functions of angles, addition and factor formulae; complex numbers; moments and couples; relative velocity; calculus; elementary function of simple real variables; graphs of simple functions; the differentiations of simple algebra; exponential and log functions, differentiation of a sum; product; quotient; function of function rules; implicit differentiation; definite and indefinite integrations of functions; application of definite and indefinite integrals to areas and volumes.

PHY 102.1 Physics Practical (1unit)

Motion in one dimension in a plane; work and energy; conservation laws; oscillation; solid friction, rotational kinematics and rotational dynamics; equilibrium of rigid bodies; gravitation, Galilean invariance, surface tension, elasticity and viscosity. Emphasis is on experimental verifications and quantitative measures of physical laws, treatment of measurement errors and graphical analysis. The experiments include studies of mechanical systems; static and rotational dynamics of rigid bodies, viscosity, elasticity, surface tension and hydrostatics

YEAR ONE (SECOND SEMESTER)

GES 103.2 Nigerian People and Culture (2 units)

Concepts of culture; The study of Nigerian history and culture in the pre-colonial, colonial and contemporary times; the Nigerian's perception of his world; cultural areas of Nigeria and their characteristics; cultural contact and social change; ethnicity and integration; evolution of Nigeria as a political unit. Norms, values, moral obligations of citizens- environmental sanitation.

FSB 102.2 General Biology II (3 units)

Varieties of organisms. Principles of classification of organisms-systematics. A study of selected animals and plant groups. Analysis of flora and fauna of assigned habitats.

CHM 131.2 General Chemistry II (3 units)

Application of the principles of chemical and physical change to the study of the behaviour of matter and interaction between matters. Course content includes, the chemistry of the representative elements and their common compounds with emphasis on graduation of their properties. Brief chemistry of the first, series of transition elements, general principles of extraction of metals; introductory nuclear chemistry.

CHM 132.2 Introduction to Principles of Organic Chemistry (3 units)

A survey of carbon compounds including an overview of the common functional groups in aliphatic and benzenoid compounds. Introduction to reactants and reaction in organic chemistry.

PHY 115.2 Heat, Light and Sound (2 units)

Thermodynamics, colorimetry and heat transfer. Geometrical optics will include reflection of light at the plane and curved surfaces, and optical instruments. Properties and progression of sound waves. Sound waves propagating in air columns. Doppler effect.

GES 101.2 Computer Appreciation and Application (2 units)

Introduction to basic computer concepts. Historical development and classification of computers. Hardware, software and firm ware components of a computer. Computer programming languages, introduction to data bases, data capture techniques. Introduction to computer networks, computer operation. Introduction to Disk Operating System (DOS). Microsoft windows and windows

applications. Introduction to data processing. An introduction to the internet.

AGR 101.2 Introductory Statistics for Agriculture (2 units)

Idea of statistics. Sequence of statistical investigation; Data collection methods; Sampling; Basic statistical notations; Methods of collation and presentation of data; Measures of location (mean, mode, median); quantities; Measures of dispersion (variance, standard deviation, standard error, coefficient of variation), skewness and kurtosis.

YEAR TWO (FIRST SEMESTER)

AGR 201.1 General Agriculture (2 units)

Definition, scope and importance of agriculture; Agricultural ecological zones and distribution of farm; Introduction to Agricultural Economics and Extension; Introduction to Farm Forestry; Introduction to Crop Science; Introduction to Soil Science; Introduction to Farm Mechanization; Introduction to Animal Science; Introduction to Fisheries and Aquaculture; Post-harvest handling of agricultural products.

CPS 201.1 Crop Anatomy, Taxonomy and Physiology (2 units)

Parts of the crop cell, cell biology and cell types. Development of cells and tissues, comparative anatomy of major plant organs. Enzymes, photosynthesis, respiration and energy utilization; Transpiration; pollination and fertilization; seed dormancy and germination, mineral nutrition. Introduction to plant taxonomy, characteristics, distribution, economic importance and local examples of leguminosae, gramineae, compositae, dioscoreasae, rutaceasae, use of plant keys. Growth and development, structure and function of plant growth hormones. **Practical:** dormancy and seed germination studies; mineral nutrition experiment.

AGE 201.1 Principles of Agricultural Economics (2 units)

Economics of agriculture, efficiency of resource allocation; Agricultural resources; Production, processing, marketing/distribution and utilization of farm produce; Cost Price analysis, demand, supply.

FWL 201.1 Introduction to Forestry and Wildlife Management (2 units)

Nature and scope of forestry and forest. Structure, classification and importance of forest. Forest products; fauna and flora. Introduction to wildlife, importance of wildlife, forestry and wildlife interlinks.

AGR 2C1.1 Community Service (1 unit)

The course is designed to make the students appreciate the dignity of labour and to acquire a sense of service to the community. Students are to execute various special projects modelled in line with their field of study.

AGX 201.1 Introduction to Agricultural Extension and Rural Sociology (2 units)

The need for agricultural extension; agricultural extension in the world and in Nigeria; basic philosophy and principles of agricultural extension; basic concepts and principles of rural sociology to an understanding of rural situation; Importance of rural communities and institutions, social stratification, social processes and social changes in rural areas; Leadership in rural communities; opinion leadership; role and function of rural leaders; communication techniques and strategies of change; various agricultural extension teaching methods, aids and their use

AGR 202.1 Introduction to Farm Power and Machinery (2 units)

Aims and objectives of farm mechanization. Basic mechanics. Workshop tools. Principles of internal combustion engines and

electric motor. Study of farm machinery used for tillage; ploughs, harrows, cultivators, farm power transmission system. Harvesting and processing equipment. (sprayers and dusters). Equipment for livestock (automatic feed conveyors, automatic drinkers for poultry, feeding and watering equipment, milking and milk handling equipment, meat processing equipment). Water lifting and irrigation equipment. Survey instruments used on the farm. Operating principles, selection and maintenance procedure of farm machinery. Farm machinery costing and records. Workshop and building materials used on the farm. **Practicals: day-to-day operations of machines and implements; visits to farm machinery suppliers such as Dizengoff, SCOA, etc.**

SOS 201.1 Introduction to Soil Science (2 Credits)

Soils -genesis and formation, factors of soil formation, weathering (physical, chemical and biological), physico-chemical properties of soils. Soil moisture, air, and temperature, soil classification and survey, scope of soil science. Soil colloids, soil reactions. Soil organic matter and soil organisms, soil and water conservation, nutrient requirements and mineral nutrition of plants, introduction to fertilizers. **Practical:** Description of soil profile pit; particle size analysis.

AGR 203.1 Introduction to Agricultural Microbiology (2 units)

Importance of microbiology in agriculture; Introduction to microbial world; Broad groups of microflora and microfauna; Classification of microorganisms and other soil organisms (bacteria, fungi, viruses, nematodes, protozoans, earthworms, and other annelids) Morphology, growth and reproduction of bacteria, yeast, moulds, viruses; Importance of soil microbiology in agriculture, classification of soil organisms; soil organic matter decomposition; microbial transformation of phosphorus, iron, nitrogen and sulphur; biochemistry and microbiology of nitrification; nitrogen fixation by legumes and non legumes and its significance. Microbial release of

nutrients in soils and plant nutrition. Influence of soil factors on population and activities of microbes; role of micro-organisms in soil fertility. Transformation of hydrocarbons and pesticides. Rhizosphere and its importance. **Practical:** use of microscopes; Cultivation of micro-organisms, preparation of culture media, isolation of bacteria and fungi; Preparation of slides for microscopic examination and identification; safety precautions in microbiology laboratory.

AGR 204.1 Computer Applications to Agriculture (2 units)

Importance of computers in Agriculture; ICT applications in Agriculture; Use of spreadsheet; use of graphics for agricultural communication; use of Powerpoint for presentation. Data management; Use of statistical packages. Visits to organizations

YEAR TWO (SECOND SEMESTER)

AGF 201.2 Farm Practice (2 units)

Fisheries

Fish culture

Hatchery production

Fish feed production

Animal Science

Livestock production

Silage making

Crop/Soil Science

Mushroom production

Composting

Budding/Grafting

Soil Survey

Forestry/Wildlife

Bee keeping

Snail production

Game management and utilization

Forest nursery/arboretum

AGR 205.2 Agro-climatology and Meteorology (2 units)

The principles, aims and scope of climatology and biogeography. The elements and control of climate and weather and the dynamics of the earth atmosphere. Radiation and heating of the atmospheric systems, atmospheric moisture, the dynamics of pressure and wind systems. Condensation and precipitation processes. Seasonal variation in temperature, day length, radiation, rainfall and evaporation. Equipment and maintenance of standard meteorological stations. The climate; relation between agriculture and climate with reference to crops, livestock, irrigation, pests and diseases. Environment and its significance to agriculture, influence of moisture, humidity temperature, radiation and wind in crop growth and production; wind breaks and shelter belts; micro-changes within crop stands and their effects on crops, selection of crops in relation to environmental factors. **Practical:** measurements of net radiation and micro-climatic parameter in crop stands, study of agro meteorological data; fieldtrips to meteorological stations.

AGR 206.2 Principles of Food Science and Technology (2 units)

Definition and scope of Food Science and Technology; Food distribution and Marketing; Food and its functions; Food habits; Food poisoning and its prevention; Principles of food processing and preservation; Discussion of different preservation methods; Deterioration and spoilage of foods, other post-harvest changes in food; contamination of foods and natural sources; Composition and structures of Nigerian/West African food; factors contributing to texture, colour, aroma and flavour of food; Cost; Traditional and

ethnic influences of food preparation and consumption pattern; Elementary Biotechnology. **Practicals**

AGR 207.2 Introduction to Home Economics (2 units)

Philosophy, scope, objectives and historical development of home economics (Food and Nutrition, Home management, Clothing and Textile); Examination of basic human needs with respect to food, clothing, shelter and health. Programme approaches in home economics which help to meet these needs. Preparation for careers in a variety of occupation. Roles of women in agriculture. **Practicals: flour confectioneries; industrial catering**

CPS 202.2 Principles of Crop Production (2 units)

Crop production and its development. The principles, problems and prospects of crop production, importance of crop rotation, cultural practices; water uptake, weeds, weed control, and their effects on crop production, pests and diseases. Basic Mendelian genetics. Principles of crop production, harvesting, processing and storage. **Practical:** test of seed viability, germination of seeds in laboratory and in field; tillage practices; identification of fertilizers; field trip to different cropping systems.

ANS 201.2: Anatomy and Physiology of Farm Animals (2 units)

Introduction and glossary of some anatomical and physiological terms. External features of farm animals including their functions and usefulness. Skeletal, digestive and other systems in ruminants and non-ruminants. Nature of farm animals (body fluids; homeostasis; temperature regulation). Blood cells and their various functions. Classes and roles of farm animals. Nutrition and digestion in non-ruminants and ruminants. Endocrinology and its functions. Egg formation and production in poultry. Lactation and milk letdown in farm animals.

ANS 202.2: Principles of Animal Production (2 units)

Animal production and its development. The livestock industry – problems and prospects. Introduction to the factors of production in animal husbandry. Descriptions of different breeds of cattle, sheep and goats; pigs, poultry and rabbits, etc. Feeding habits of farm animals. Principles of breeding and livestock judging. General principles of management for different classes of farm animals (parent stock, breeders, weaners, etc). Livestock husbandry operation and production systems for different livestock – cattle, sheep and goats, poultry, swine, and rabbit. The impacts of the environment on livestock production.

FSH 201.2 Introduction to Fisheries (2 units)

Introduction, definitions, nature and scope of fisheries; Fish products and their importance. External morphological features of bony and cartilaginous fishes.

YEAR THREE (FIRST SEMESTER)

AGR 301.1 Introduction to Remote Sensing (2 units)

Introduction; Physics of EMR (Energy sources, radiation principles); characteristics of Remote Sensing sensors and satellites; Reflectance properties of earth surface and atmospheric features (energy interactions, spectral reflectance curve, spectral reflectance of soil, water and vegetation); Remote sensing data analysis (visual image interpretation, digital image processing); Integration of remote sensing with GPS and GIS; Reference field data; successful applications. **Practicals**

AGR 302.1: Agricultural Research and Report Writing (2 units)

Purpose and type of research; research proposal; problem identification and hypothesis formulation; methods of primary and secondary data collection; data organization and presentation; scientific writing; formats for project and thesis presentation.

Review of basic statistics: frequency distribution, measures of location and dispersion; Principles of field experimentation.

AGE 301.1 Introduction to Farm Management (2 units)

The nature of farm management and production economics. Theory of agricultural production and revenue concepts; Elements of time, risk, and uncertainty in agricultural production. Break-even, gross net margin, and budgetary analysis.

AGE 302.1 Introduction to Mathematical Economics for Agriculture (2 units)

Simple production function. The nature of Mathematics for Economists, Terminologies, Concepts and Tools in Mathematics for Economists; variables, constants, parameters and coefficients. Graphs, slopes and intercepts. Supply and Demand analysis. Derivatives and rules of differentiations. Income and determination models IS-LM analysis. Marginal concepts in Economics. Integration and logarithms.

AGE 303.1 Economic Analysis (2 units)

Nature and scope of macro-economics, circular flow of national income and product. Determinants of aggregates. National income, expenditure, investments, interest rates, savings and employments. Demand and supply of money and monetary policies. Macro-economic equilibrium. Nature, causes and remedies of inflation. International trade

ANS 301.1: Animal Health and Diseases (2 units)

The economic impacts of diseases on livestock and poultry production; environmental factors in relation to major livestock and poultry diseases. Helminth and protozoal parasites of livestock and poultry. Bacterial, fungal and viral infections of farm animals; The classification, diagnosis, epidemiology, prevention, treatment and control of different livestock and poultry diseases. Notifiable

diseases. Principles of immunity and disease resistance and their practical applications. The science, handling and management of sick animals; Drug administration, vaccination programmes and schedules. Ante- and post-mortem examinations in the diagnosis of diseases; Applied entomology and elements of chemical and biological control of disease vectors in livestock and poultry; Applied parasitology in livestock and poultry, and their socio-economic effects.

ANS 302.1: Non-Ruminant Animal Production (2 units)

Non-ruminant animal industry and its contribution to national growth and development. Importance and distribution of non-ruminant animals. Breeds and production systems. Nature of non-ruminant farm animals – poultry, swine, rabbits, and selected micro-livestock of socio-economic importance. Management and husbandry practices. Animal health and hygiene. Non-ruminant products and by-products, and marketing.

CPS 301.1 Arable Crop Production (2 units)

Origin, distribution, soil and climatic requirements of cereals, grain legumes, root and tuber crops, fibre crops, sugar crops and other important arable crops in Nigeria. Improved varieties, production practices, harvesting, utilization, processing, storage and economic aspects of the selected arable crops. **Practical:** study of various production practices of some selected crops from sowing to harvesting in small plots.

CPP 302.1 Introduction to Entomology (2 units)

Insect morphology, structure and function; life cycles and metamorphosis, semi-chemicals – kairomones, allomones, pheromones; insects classification and identification; orders of insects of economic importance with special emphasis on insects found in Nigeria. **Practical:** insects morphology, taxonomy and

identification; killing and preservation of insects; preparation for insects parts, fixing, staining and drawing.

SOS 301.1 Pedology and Soil Physics (2 units)

Soils, its origin, and formation. Soil morphological characteristics, soil components, rock and mineral weathering. Profile pit, soil survey, soil mapping, soil classification, properties and management of Nigerian soils. Definition of soil physics, physical properties of soils, mechanical analysis of soils, textural profile, soil structure, bulk density, porosity, effects of applied stress on soil, soil compaction and compression, soil air and aeration, soil water content, properties and forces acting on soil water, management of soil physical conditions, soil tilth and tillage, soil physics and agriculture **Practical:** laboratory and field determinations of soil physical properties, soil profile pit description.

YEAR THREE (SECOND SEMESTER)

ANS 303.2: Ruminant Animal Production (2 units)

Ruminant animal industry and its contribution to the growth and development of an economy. Breeds and production systems. Housing, feeding, breeding and reproduction in ruminants. Management of breeding stock; growing of young ruminants including housing and feeding of cattle, sheep and goats. Ruminant health and hygiene. Ruminant products and by-products, and marketing.

ANS 304.2: Animal Genetics and Breeding (2 units)

History of genetics and breeding; Chromosomes structure, number and variation; Gene and genotype; Genetic code; Mendelism; fundamental principles of inheritance; Quantitative and qualitative characters and their inheritance. Different types of gene action, values and means, repeatability, heritability, etc. Animal variation and selection principles; Breeding and environmental effects; Inbreeding, pure line breeding, cross breeding and other breeding

methods. Selection in breeding, and genetic engineering in contemporary livestock production systems.

AGF 301.2 Field Course (1unit)

Study visit to areas, institutions, industries, etc, relevant to students' area of specialization. Students are required to write a report on the trip.

AGR 303.2 Agricultural Biochemistry (2 units)

Biochemistry in agriculture, food and nutrition; Proteins, vitamins, minerals in farm produce- eggs, meat, vegetable, etc. food processing and natural products; Metabolism of carbohydrates, proteins and lipids (metabolic pathways).

CPS 303.2 Permanent Crops (2 units)

Origin, distribution, soil and climatic requirements of some important permanent and perennial crops such as cocoa, oil palm, rubber, coffee, tea, coconut, sugarcane, kola, cashew, mango, bananas, plantain, citrus, guava, gum Arabic, etc. Production practices, improvement, harvesting, utilization, processing, storage and economic aspects of some selected permanent and perennial crops. **Practical:** visit to different nurseries and plantations to observe practices followed in the propagation of permanent crops; propagation of few permanent crops in the University farm.

CPS 304.2 Crop Genetics and Breeding (2 units)

Cell structure and components, chromosomes, structure, number and variations; linkage and cross-over, mutation and genes in population and transmission of biological variations, theory of evolution, fundamental principles of inheritance. Mendelian genetics, introduction to population and quantitative genetics. Objectives and general principles of crop breeding including their application to self-pollinated and vegetatively propagated crops. General and special methods of selection, in-breeders and out-

breeders; compatibility; male sterility. Heterosis, polyploidy in crop breeding; mutation breeding. Breeding methods for crop improvement, development, multiplication and distribution of improved varieties.

CPP 305.2 Introduction to Phytopathogens and Weed Science (2 units)

The major fungi, bacteria and viruses; nematodes, weeds and other disease organisms of crops and stored products. Study of the effects of bacteria, fungi, viruses and nematodes – their biology and ecology; morphology and taxonomy of weeds; modes of dispersal and germination; characteristics, classification and biology of weed. Taxonomy, morphology and life history of plant parasitic nematodes. **Practical:** identification of common weeds in the area; field study in the University farm. Microscopic studies of nematodes; techniques of processing soil and plant material by means of sifting and gravity and Berman-funnel techniques

SOS 302.2 Soil Chemistry I (2 units)

The soil chemical composition, soil colloids, saline, alkaline, and acid soil properties, ion exchange, cation exchange capacity, base saturation, chelating agents and soil organic matter. Laboratory exercises. **Practical:** Determination of soil carbonates, organic matter content, extraction, fractionation, and characterization, exchangeable Ca, Mg, K, Na, and ESP determination, specific anion reactions, soil pH measurement, electrical conductivity measurement, exchangeable NO_3^- and NH_4^+ determination.

AGX 301.2 Extension Teaching, Learning Methods and Processes (2 unit)

The nature and elements of communication; The meaning of the concepts of teaching, learning and motivation; steps and principles of teaching and learning; extension teaching methods; preparation and use of teaching materials and aids

GES 300.2: Fundamentals of Entrepreneurship (2 units)

Concept, history and development of entrepreneurship; The entrepreneur qualities and characteristics; The Entrepreneur and Business environment; identifying business opportunities; starting and developing new business ventures; legal forms of business ownership and registration; Types of business ownership; Feasibility studies; Role of small and Medium Scale Enterprise (SME) in the economy; Role of government on Entrepreneurship; Business location and layout; Accounting for SME; Financing SME; Managing of SME; Marketing in SME; Risk Management of SME; Success and Failure factors of SME; Prospects and Challenges of Entrepreneurship and Intrapreneurship; Ethical behaviour in small business.

CROP PROTECTION OPTION

YEAR FIVE (FIRST SEMESTER)

AGR 501.1 Experimentation Techniques (2 Units)

Experimental designs and field layout (CRD, RCBD, Other factorial experiments); their sources of variation and assumptions. Sampling techniques: plot sampling techniques, sampling units and sampling size; Experimental errors; types I and II; Data analysis; cropping systems experiments: Land Equivalent ratio; Analysis of variance (ANOVA) its assumptions. Data transformation (Log, Square root transformation, Arcsine; their assumptions). Analysis of missing data. Pair wise comparison (t-test). Parametric (LSD, DMRT, Studentized test, Scheffe's test, Turkey's test) and Non parametric (Kruskal Wallis, Wilcoxon, Mann Whitney, Wilcoxon-Signed rank-test); Regression and Correlation Analysis; conditions for use, assumptions and properties in linear regression, sources of variation in linear regression, interpretation and prediction of linear regression, interpretation and estimation of correlation co-efficient; Data handling and presentation-graphic, tables, etc.; Quantitative assessment of pesticidal efficacy - Toxicological statistics.

Experimental method; Determination of the critical toxic effects (ED₅₀, LD₅₀, LC₅₀, KD₅₀, LT₅₀).

AGR 502.1: Advances in Agriculture (2 units)

Historical background, Principles (principles of health, fairness, ecology, care) and practice of organic agriculture; Organic crop production, pest and disease management, predator control for sustainable and organic livestock production. Organic forestry, climate change and carbon sequestration, pasture management. Enterprise budgets and production costs for organic production, organic marketing resources and green markets; Hydroponic Agriculture: Preparation of nutrient solutions, media and methods (water culture, sub irrigation, slop and drip). Benefits and constraints; Tissue Culture and Cloning Technology: Introduction, laboratory requirements, effects of hormone balance on explants growth and morphogenesis, callus formation and multiplication, establishment of suspension cultures and anther culture. Applications and relevance to Agriculture. Criticisms and laws (Bioethics and Biopiracy). Genetically modified organisms (GMOs) (Health issues, influence on biodiversity, benefits and demerits); organic farm certification and export markets.

CPP 501.1 Weed Science (2 units)

Losses due to weeds; problems associated with weed infestation; methods of weed control - cultural, physical, biological, mechanical, chemical, etc., major weeds of cultivated plants and crops, pasture and gardens; aquatic weeds, physiology of weeds; crop-weed-fertilizer interrelationship; classification of herbicides; chemistry and selectivity, formulation, application, storage and mode of action. Herbicides and the environment, safety factors in the use of herbicides. Application equipment and techniques, practical methods of controlling weed in Nigeria. **Practical:** identification of major weeds of the area; visit to nearby farms; fields experiment on weed-crop-fertilizer inter-relationship and weed control.

CPP 502.1 Crop Pathology (2 units)

History of plant pathology; importance of plant pathology in agriculture, general characteristics and classification of plant pathogens - fungi, bacteria, virus and mycoplasmas. Life history of representative plant pathogenic fungi responsible for important plant diseases, events in disease development, transmission of plant pathogens, major crop diseases (caused by animate and inanimate agents), Host-parasite interaction, factors affecting epiphytotics; predisposition, variability, physiologic specialization, resistance and susceptibility, structural and biochemical defenses.

Practical: microscopic studies of fungi and phytopathogenic bacteria, identification of major diseases of cultivated plants.

CPP 503.1 Insect Ecology (2 units)

Interdependence between economic entomology and insect ecology; expressing population changes, populations and generation curves, mortality and survivals, etc. Factors affecting population fluctuations, processes regulating abundance. Life tables, inference from life table; forecasting outbreaks. **Practical:** life table, mark-release-recapture as a technique for monitoring changes in population, etc.

CPP 504.1 Applied Nematology (2 units)

Host-plant relations, life cycle, pathogenicity and control of nematodes attacking tropical crops; plant disorders due to nematodes activities, extractions and identification of plant and soil nematodes. **Practical:** teasing plant materials in water; Baermann funnel techniques and sieving technique; isolating, killing and fixing specimens and preparing microscopic slides for study and future references.

CPP 505.1 Insect Pest Management (2 units)

Origin and nature of pest problems; life cycle and food habits of insects as basis for control measures. Insects and mites in the field and store; vectors of plants pathogens, crop ecosystem management and insects relationship to plant pathogen, weed and bird control. Control techniques including cultural, physical, legislative and microbial control; entomophagous insects and biological control. Integrated pest management- its concept, application and economic considerations. **Practical.** Detailed studies of feeding stage and food habits with particular reference to crop and storage pest, laboratory studies of selected pests and field collections.

CPS 512.1 Farming Systems (2 units)

Phases of agricultural development, salient characteristics of different farming systems, shifting and semi-shifting cultivation, development of continuous cropping, mono-cropping, inter-cropping, multiple-cropping, crop rotation, dry land farming, contour farming, alley farming, Fadama farming, transition from traditional to modern agricultural system to semi-intensive and intensive cropping system; components of farming system, mushroom farming, economics of crop production, modern agriculture and green revolution in developing countries.

Practical: field experiment in the University farm on different cropping system; field trip to various part of the country to study the different cropping systems.

CPP 500.2 Seminar (1 unit)

Each final year student is expected to deliver seminar on a chosen topic.

YEAR FIVE (SECOND SEMESTER)

CPP 599.2 Research Project (6 units)

Each final year student must undertake a research project under the supervision of a lecturer(s), propose a topic and present findings of the research work.

CPP 506.2 Pesticides and their application (2 units)

Classification, chemistry, formulation and selectivity of insecticides, herbicides, fungicides, etc., their toxicity and mode of action; phytotoxicity, pest resurgence, pest resistance and environmental hazards, pesticides behaviour in soils; microbial pesticides. Pesticide application methods and equipment. **Practical:** experiments to demonstrate selectivity, toxicity, phytotoxicity and other properties of pesticides.

CPP 507.2 Agricultural Entomology (2 units)

Insects in relation to selected tropical crops; pest description and biology in relation to major cash crops, field, horticultural and tree crops in Nigeria; **Practical:** observation of insects attacking important crops in Nigeria, their life cycles; extent of damage; field trips to local farms to make observations.

CPP 508.2 Crop Disease Control(2 units)

General principles of crop disease control - physical, biological, cultural, chemical, mechanical, etc.; etiology; disease cycle; symptoms and control of important diseases of cereals (maize, sorghum, pearl millet, rice, wheat) grain legumes (groundnuts, cowpea, soybean, etc.), root and tubers (yam, cassava, cocoyam, etc.) sugarcane, tree crops, horticultural crops. **Practical:** Collection and identification of diseased crops; application of fungicides and bactericides.

CPP 509.2 Pests of Stored Products 2 units.

Types of stored crops; Storage structures; Assessment of loss of stored crops. Biology, ecology and management of insect, mite and

vertebrate pests (major families of pest beetles and moths; acarines; rodents, etc) and disease organisms (fungi, bacteria, viruses and nematodes) affecting stored crops. Abiotic factors (temperature, humidity, light, moisture, etc.) which influence the storage environment. **Practical:** identification and classification of major insect, fungi, vertebrate pests of stored crops; use of selected pesticide in storage.

CROP PRODUCTION OPTION

YEAR FIVE (FIRST SEMESTER)

CPS 510.1 Forage and Fodder Crop Production (2 units)

Adaptation and botany of indigenous and introduced pastures and forage plants. Characteristics of grasses, legumes and shrubs. Establishment, propagation and seed production of pasture plants; the utilization and maintenance of permanent and temporary pastures. Forage conservation; Grazing systems. **Practical:** collection and identification of forage crops.

CPP 501.1 Weed Science (2 units)

Losses due to weeds; problems associated with weed infestation; methods of weed control - cultural, physical, biological, mechanical, chemical, etc., major weeds of cultivated plants and crops, pasture and gardens; aquatic weeds, physiology of weeds; crop-weed-fertilizer interrelationship; classification of herbicides; chemistry and selectivity, formulation, application, storage and mode of action. Herbicides and the environment, safety factors in the use of herbicides. Application equipment and techniques, practical methods of controlling weed in Nigeria. **Practical:** identification of major weeds of the area; visit to nearby farms; fields experiment on weed-crop-fertilizer inter-relationship and weed control.

AGR 501.1 Experimentation Techniques (2 Units)

Experimental designs and field layout (CRD, RCBD, Other factorial experiments); their sources of variation and assumptions. Sampling

techniques: plot sampling techniques, sampling units and sampling size; Experimental errors; types I and II; Data analysis; cropping systems experiments: Land Equivalent ratio; Analysis of variance (ANOVA) its assumptions. Data transformation (Log, Square root transformation, Arcsine; their assumptions). Analysis of missing data. Pair wise comparison (t-test). Parametric (LSD, DMRT, Studentized test, Scheffe's test, Turkey's test) and Non parametric (Kruskal Wallis, Wilcoxon, Mann Whitney, Wilcoxon-Signed rank-test); Regression and Correlation Analysis; conditions for use, assumptions and properties in linear regression, sources of variation in linear regression, interpretation and prediction of linear regression, interpretation and estimation of correlation co-efficient; Data handling and presentation-graphic, tables, etc.; Quantitative assessment of pesticidal efficacy - Toxicological statistics. Experimental method; Determination of the critical toxic effects (ED_{50} , LD_{50} , LC_{50} , KD_{50} , LT_{50}).

AGR 502.1: Advances in Agriculture (2 units)

Historical background, Principles (principles of health, fairness, ecology, care) and practice of organic agriculture; Organic crop production, pest and disease management, predator control for sustainable and organic livestock production. Organic forestry, climate change and carbon sequestration, pasture management. Enterprise budgets and production costs for organic production, organic marketing resources and green markets; Hydroponic Agriculture: Preparation of nutrient solutions, media and methods (water culture, sub irrigation, slop and drip). Benefits and constraints; Tissue Culture and Cloning Technology: Introduction, laboratory requirements, effects of hormone balance on explants growth and morphogenesis, callus formation and multiplication, establishment of suspension cultures and anther culture. Applications and relevance to Agriculture. Criticisms and laws (Bioethics and Biopiracy). Genetically modified organisms (GMOs)

(Health issues, influence on biodiversity, benefits and demerits); organic farm certification and export markets.

CPS 512.1 Farming Systems (2 units)

Phases of agricultural development, salient characteristics of different farming systems, shifting and semi-shifting cultivation, development of continuous cropping, mono-cropping, inter-cropping, multiple-cropping, crop rotation, dry land farming, contour farming, alley farming, Fadama farming, transition from traditional to modern agricultural system to semi-intensive and intensive cropping system; components of farming system, mushroom farming, economics of crop production, modern agriculture and green revolution in developing countries.

Practical: field experiment in the University farm on different cropping system; field trip to various part of the country to study the different cropping systems.

CPS 513.1 Plant Breeding and Seed Production (2 units)

Genetic significance of reproductive systems in cultivated plants. Sexual reproduction in crop plants, selection methods in breeding programmes. The role of plant breeding in disease and pest control in crops. Maintenance of breeding stocks. Nature and structures of seeds. Seed certification and release to the farmers. Certified seed multiplication and distribution to the farmers.

CPS 514.1 Floriculture and Landscaping (2 units)

Vegetable crop production, and other horticultural crops including nuts, spices, and medicinal plants; Principles and techniques of sexual and asexual propagation with special reference to indigenous/tropical ornamental plants. Importance and classification of tropical and sub-tropical annual flower plants, principles of floriculture and landscaping; landscaping of public parks and institutions; establishment and maintenance of hedges and lawns. **Practical:** practices in common propagation methods,

cutting, budding, grafting; layering and inarching techniques; identification of common ornamental flowering plants, planning of flower gardens and their layout.

CPS 515.1 Crop Physiology and Production (2 units)

Water, light, temperature and gases as factors of environment, growth phases and rhythms in crop; assimilate partitioning in relation to yield determination, crop geometry, cultural manipulation; plant growth regulators in crop production; photoperiodism and vernalization in crops and their effects on crop introduction and production. Ecophysiology, physiology of atmospheric nitrogen fixation and combined nitrogen; physiology of tuber formation and multiplication; plant-water relations; dormancy, mineral nutrition, physiology of herbicides; physiological aspects of pollution (Environmental impact assessment, EIA on crops) **Practical:** experiments on different growth phases of few selected crops, use of growth regulating chemicals at different stages of growth and their effects, experiments on photoperiodism, experiments on pollution.

YEAR FIVE SECOND SEMESTER

CPS 500.2 Seminar (1 unit)

Each final year student is expected to deliver seminar on a chosen topic.

CPS 516.2 Post-harvest Physiology and Product Storage (2 units)

Storage life of harvested fruits, seeds, vegetables and flowers; tropical environment in relation to maturity, ripening and senescence. Physical and chemical indices of quality in fruits, seeds, vegetables and other crop products. Storage of crop materials. Traditional methods of vegetable processing and storage. Fundamentals and principles of crop storage and transportation. Storage and shelf life problems, ideal atmosphere for storing fruits, seeds, vegetables, flowers and other crop products. Controlled

environment for transit and long term storage; protective treatment, design and operation of equipments for storage and preservation. **Practical:** traditional and modern methods of processing and preservation of indigenous vegetables and fruits.

CPS 517.2 Vegetable Crop Production (2 units)

Definition, scope and importance. Production Practices(Outdoor and Protected Culture) including vegetable processing, marketing and distribution, sexual and asexual propagation **Practical.** Grow indigenous vegetables. Practice asexual propagation methods.

SOS 509.2 Fertilizers and their uses (2 units)

Fertilizers and their management, Nutrient uptake, utilization and deficiency symptoms; fertilizer sources, properties and reactions; and fertilization practices. Fertilizer manufacture, sources, application methods , rates and timing. Handling and storage of fertilizers, crop growth and response to nutrients.**Practical:** formulation of compound fertilizer, application, pot/field experiment.

CPP 506.2 Pesticides and their application (2 units)

Classification, chemistry, formulation and selectivity of insecticides, herbicides, fungicides, etc., their toxicity and mode of action; phytotoxicity, pest resurgence, pest resistance and environmental hazards, pesticides behaviour in soils; microbial pesticides. Pesticide application methods and equipment. **Practical:** experiments to demonstrate selectivity, toxicity, phytotoxicity and other properties of pesticides.

CPS 518.2 Agronomy of Neglected Crops (2 units)

Origin, distribution and importance of neglected crops (*Ukazi*, *Uziza*- West African black pepper, Water leaf, Oil bean, *Dawadawa*- Locust bean tree, *Ukpo*), etc.; Climatic and soil requirements, cultural operations, methods of propagation, harvesting, handling and storage of some major neglected crops of great potentials in Nigerian species, medicinal, food crops, plantation crops, etc.

CPS 599.2 Research Project (6 units)

Each final year student must undertake a research project under the supervision of a lecturer(s), propose a topic and present findings of the research work.

SOIL SCIENCE OPTION

YEAR FIVE (FIRST SEMESTER)

SOS 501.1 Soil Chemistry II (2 units)

Introduction to basic chemistry concepts, atoms and elements, compounds, molecules, and atomic bonds, ions, elements needed by plants, chemical reactions, adsorption and absorption, organic/ organic, soil colloids: definition, importance, soil solution, cation exchange capacity (CEC) and base saturation, factors influencing CEC, significance, anion exchange, pH, effect of pH on nutrient availability and uptake, soil acidity; distribution of acid soils, problems associated with acidity and liming. Reclamation of acidic/sodic soil.

SOS 502.1 Soil Physics (2 units)

Physical properties of soil, size groupings, surface relationship, specific surface of soil particle. Genesis of compound structure, effects of texture on soil structure, soil tilth and tillage, soil consistency, soil air and aeration, dynamic properties of soils, soil thermal properties, soil temperature, soil heat capacity, heat flow through soil. Determination of soil water content, properties of soil water, energy state of soil water, saturated and unsaturated flow, infiltration and infiltration equations, redistribution of soil water.

Practical: Laboratory and field measurements of soil physical properties (infiltration, water retention curves, aggregate stability etc.).

SOS 503.1 Soil- Water- Plant relations (2 units)

Soil characteristics, soil water, soil salinity and its effect on plant growth, nitrogen, sulphur, carbon, phosphorus cycle. Hysteresis, capillary rise of soil water. Water movement in soils. Field capacity, the continuous chain for relationship between soil-water-plant-atmosphere. Soil colloids; their nature and practical significance to plant growth regulators. Soil stabilizers, macro and micronutrient elements and plant growth, Plant water consumption and wilting point.

SOS 504.1 Soil Fertility and Plant Nutrition (2 units)

Factors affecting plant growth – Edaphic, climatic, etc. Mathematical models of plant response to nutritional factors - Forms of plant nutrients in Soils - Qualitative and quantitative evaluation of nutrient status in Soils - Available forms and their evaluation using biological and chemical methods including isotope techniques. Plant nutrients definition, classification, role(s) in plant metabolism. Nutrient absorption-mechanisms and dynamics, competition and factors affecting them. Nutrient translocation in plants – pathways, mechanisms, regulations. - Factors affecting plant nutrition, Correcting nutritional disorders. **Practical:** Identification of various symptoms of nutrient deficiencies, identification of fertilizers and calculations.

AGR 501.1 Experimentation Techniques (2 Units)

Experimental designs and field layout (CRD, RCBD, Other factorial experiments); their sources of variation and assumptions. Sampling techniques: plot sampling techniques, sampling units and sampling size; Experimental errors; types I and II; Data analysis; cropping systems experiments: Land Equivalent ratio; Analysis of variance (ANOVA) its assumptions. Data transformation (Log, Square root transformation, Arcsine; their assumptions). Analysis of missing data. Pair wise comparison (t-test). Parametric (LSD, DMRT, Studentized test, Scheffe's test, Turkey's test) and Non parametric

(Kruskal Wallis, Wilcoxon, Mann Whitney, Wilcoxon-Signed rank-test); Regression and Correlation Analysis; conditions for use, assumptions and properties in linear regression, sources of variation in linear regression, interpretation and prediction of linear regression, interpretation and estimation of correlation co-efficient; Data handling and presentation-graphic, tables, etc.; Quantitative assessment of pesticidal efficacy - Toxicological statistics. Experimental method; Determination of the critical toxic effects (ED_{50} , LD_{50} , LC_{50} , KD_{50} , LT_{50}).

SOS 505.1 Soil Microbiology (2 units)

Soil microbiological communities. Factors affecting microbial communities in soil; Collection and processing of microbial soil samples; Composting; Biofertilization - Rhizobial inoculation, mycorrhizal fungal inoculation; Biocontrol by soil bacteria and soil fungi. Genetic modification of microbial inocula; Microbial ecology of polluted soils; Soil ecological effects of genetically modified microbes; Degradation of xenobiotics; Bioremediation in contaminated soils; Environmental modification for bioremediation; Bioremediation efficacy testing; Microbial leaching of metals in soils; Management of the Nitrogen cycle in agriculture; Microbial decomposition under aerobic and anaerobic conditions.

SOS 506.1 Soil Survey and Land Use Planning (2 units)

Basic principles of soil classification; Soil profile study and description; soil survey methodology; soil forming minerals; Soil forming factors; assemblage of maps; use of aerial photographs, topographic maps, field survey versus grid survey; field mapping; soil morphological investigations. Land capability classifications for various purposes, land potential assesment. **Practical:** laboratory determinations; soil correlation; soil survey, mapping and report writing, interpretive reports, land use planning/management

SOS 507.1 Soil and Plant Analysis (2 units)

Soil and plant sampling, sample preparation; theories and procedures for chemical analysis of soil and plant materials. Soil analysis (nitrogen, phosphorus, potassium, organic carbon, calcium magnesium etc), determination of soil pH. Plant analysis (basic plant nutrients). Interpretation of data. Maintenance and operations of major analytical instruments; flame photometer, colorimeter, spectrophotometer, amino acid analyzer, pH meters; conductivity bridge; gas systems for monitoring analytical procedures; features and functions of a soil testing laboratory.

AGR 502.1: Advances in Agriculture (2 units)

Historical background, Principles (principles of health, fairness, ecology, care) and practice of organic agriculture; Organic crop production, pest and disease management, predator control for sustainable and organic livestock production. Organic forestry, climate change and carbon sequestration, pasture management. Enterprise budgets and production costs for organic production, organic marketing resources and green markets; Hydroponic Agriculture: Preparation of nutrient solutions, media and methods (water culture, sub irrigation, slop and drip). Benefits and constraints; Tissue Culture and Cloning Technology: Introduction, laboratory requirements, effects of hormone balance on explants growth and morphogenesis, callus formation and multiplication, establishment of suspension cultures and anther culture. Applications and relevance to Agriculture. Criticisms and laws (Bioethics and Biopiracy). Genetically modified organisms (GMOs) (Health issues, influence on biodiversity, benefits and demerits); organic farm certification and export markets.

YEAR FIVE (SECOND SEMESTER)

SOS 500.2 Seminar (1 unit)

Presentation of a seminar on an approved current topic in soil science.

SOS 599.2 Research Project (6 units)

Each final year student must undertake a research project under the supervision of a lecturer(s), propose a topic and present findings of the research work.

SOS 508.2 Soil Classification (2 units)

The study of soil genesis, classification, and geomorphology / evolution of soils, their organization into natural units and their distribution throughout the world. Physical, chemical, and morphological soil characteristics. Processes that influence the development of soils- biological, physical, and chemical, soil forming factors ,distribution of the soils of the world. soil morphology, soil taxonomy, diagnostic epipedons and subsurface horizons, soil orders, suborders, great groups, subgroups, families, and series soil forming reactions, soil forming factors, major soils of the world: their genesis and distribution. **Practical:** description of soil profile pit

SOS 509.2 Fertilizers and their uses (2 units)

Fertilizers and their management, Nutrient uptake, utilization and deficiency symptoms; fertilizer sources, properties and reactions; and fertilization practices. Fertilizer manufacture, sources, application methods , rates and timing. Handling and storage of fertilizers, crop growth and response to nutrients. **Practical:** formulation of compound fertilizer, application, pot/field experiment.

SOS 510.2 Remote Sensing and GIS (2 units)

Definition of remote sensing; History, evolution, and basic principles and vocabulary; Electromagnetic radiation and its interaction: foundation and principles of remote sensing. Remote sensing techniques, photogrammetry; sensors (multispectral and hyperspectral); Electromagnetic induction (EMI) measurement of soil electrical conductivity (EC); Ground Penetrating Radar (GPR); Thermal infrared imaging/thermography; Lidar (light detection and ranging) SAR: Synthetic Aperture Radar; Passive microwave radiometry; Passive gamma ray spectrometry; etc. Ground, aerial, and satellite/space platforms, Soil characterization (e.g., mineralogy, moisture, organic matter etc.) and mapping, Land use/Land cover; Precision Agriculture: Topographic mapping, Wetland restoration, Water quality; On-site waste disposal, Famine Early Warning Systems (FEWS), Post-harvest processing applications.

SOS 511.2 Irrigation and Drainage (2 units)

Types of irrigation; costs and profitability of irrigation; application of irrigation to different crops. Soil-water-plant-atmosphere relationships; crop water requirements (meteorological approach and critical growth stages for water of different field crops) scheduling irrigation for major crops; time of irrigation; agronomic management of irrigated crops; crop rotations and sequence under irrigated conditions, evaporation losses of irrigation water, maintenance of irrigation equipments, drainage.

SOS 512.2 Soil Conservation and Remediation (2 units)

Meaning and significance of soil conservation, causes, agents, and types of soil erosion, factors influencing soil erosion, quantitative and qualitative estimation of soil loss, erosivity and erodibility, problems of soil erosion, erosion control techniques, restoration of eroded lands, wind erosion, soil degradation, remediation of degraded land, administrative and legislative measures to prevent land degradation, including oil spills. Bioremediation,

phytoremediation, etc. Sources of salts in soil, salinesoil, alkali soil, leaching factor, water balance and salt balance relationship, SAR, ESR, ESP, water quality criteria. Threshold concentration, chemical amendments. **Practical:** Field trips to regions with saline problems and oil pollution, analysis of water and soil samples, construction of runoff plots.

CPP 506.2 Pesticides and their application (2 units)

Classification, chemistry, formulation and selectivity of insecticides, herbicides, fungicides, etc., their toxicity and mode of action; phytotoxicity, pest resurgence, pest resistance and environmental hazards, pesticides behaviour in soils; microbial pesticides. Pesticide application methods and equipment. **Practical:** experiments to demonstrate selectivity, toxicity, phytotoxicity and other properties of pesticides.

DEGREE STRUCTURE

The Faculty of Agriculture runs a five (5) year degree programme in Agricultural Economics and Extension, Animal Science and Fisheries, Crop and Soil Science, and Forestry and Wildlife Management for regular students. The basic entry requirement is the Senior Secondary Certificate Examination/West African School Certificate/General Certificate of Education with credits in five relevant subjects including English Language, Mathematics, Chemistry, Biology/Agricultural Science, and any one of Physics, Geography and Economics.

REQUIREMENTS FOR A BACHELOR'S DEGREE

To obtain a Bachelor of Agriculture (B. Agric.) degree in the faculty of Agriculture a student must complete an approved programme of study consisting of:

(a) University Required Courses: Four General Studies Courses namely (GES 101.0, GES 101.2, GES 102.1, GES 103.2) prescribed for all students in the university; and one community Service Course selected from those approved for the faculty. A grade of not below "E" must be achieved in each of the above courses. The purpose of general studies courses is to improve basic intellectual and communication skills of the students and to promote a continuous awareness and understanding of contemporary society as well as the historical and cultural origins of people. On the other hand, Community service is a field project directed towards services to the community or the university and is an integral part of the degree programme. The objective of the project is to involve both staff and students in a practical way with some of the problems of society as well as with efforts to provide solutions to them, and to inculcate and develop in both staff and students a consciousness of their responsibilities to society and the satisfaction of rendering service to others. The projects which are practical in nature require the application of some of the skills being acquired in the degree programme to serve the community and generally involve manual work. It is credit-earning and is an essential requirement in the degree programme.

(b) Faculty-wide Courses: These are the courses prescribed by the Faculty for all its students across the faculty. A grade of not less than "E" must be obtained. The objective is to emphasize the integral nature of our programme.

(c) Courses in the students' major fields of interest: These shall begin as a limited number of major courses in the first two years and occupy most of the students' time in subsequent years. At least, a grade of "E" must be achieved in each of these courses.

(d) Elective Courses: Elective courses offer some opportunities to students to broaden their interest, either within or outside their major discipline. Subject to the advice of their Academic Adviser, students are encouraged to follow their personal interests in electives. Students must pass all elective courses they have chosen with at least “E” grade.

In order to graduate an undergraduate student must have at least 150 credit units and maximum of 210 credit units from year one to year five. The candidates are also required to pass the relevant courses under the general studies programme in order to graduate with a Bachelors Degree in Agriculture.

The award of a Bachelor’s degree in Agriculture is classified as follows

Cumulative Grade Point average	Class of Degree
4.50 – 5.00	First Class
3.50 – 4.49	Second Class Upper
2.40 – 3.49	Second Class Lower
1.50 – 2.39	Third Class
1.00 – 1.49	Pass

2.1 University of Port Harcourt does not admit “direct entry” into the second year of the degree programme. NECO, NABTEB certificates are acceptable.

2.2 Scientific training

In the training of scientists, the programme gives adequate emphasis to the practical, social and cultural implications of scientific knowledge and seeks to correct some of the disabilities inherent in scientific education in the society that is still largely technologically backward and superstitious. This shall be done even if it requires departure from some of the traditional methods of European and American scientific education. To achieve these

objectives the programme includes training in the mechanical skills that are usually taken for granted in technologically more advanced societies but are usually lacking in our students, and very vital for scientific innovation and advancement.

2.1.4 Framework for degree structure

The general framework for the degree structure is as follows:

1st Year	2nd year
General studies Courses Foundation Courses Major Courses	General Studies Courses(where applicable) Foundation Courses Major Courses Community Service Courses Elective courses
3rd Year	4th Year
General Studies Courses (where applicable) Major Courses Elective Courses	SIWES
5th Year	6th Year
Major Courses (where applicable) Elective Courses (where applicable) Seminar courses (where applicable) Projects (where applicable)	Major Courses (where applicable) Elective Courses (where applicable) Seminar courses (where applicable) Projects (where applicable)
7th Year	
Major Courses (where applicable) Elective Courses (where applicable) Seminar courses (where applicable) Projects (where applicable)	

3.0 REQUIREMENTS FOR MATRICULATION

3.1 University Requirement

The basic admission requirement of the university is:

1. Five credits in Senior Secondary Certificate or equivalent, including English, obtained at not more than two sittings.
2. A score in JAMB not below the cut-off point for the particular department in the year in question. The JME subjects must be relevant to the program desired by potential students.

3.2 Departmental Requirements

In addition to meeting the basic admission requirements of the University, potential students are also required to fulfil the requirements of the department of Crop and Soil Science.

3.3 Transfer Requirements. For conditions on transfer or change of programme, please see sections 9-10.

4.0 GUIDELINES FOR COURSE SYSTEM AND INSTRUCTION

- 4.1 For the purpose of teaching and examination, the academic year is divided into two semesters, each of approximately sixteen weeks of teaching.
- 4.2 **Instructions shall be** by courses and every proposed course with an outline of contents must be presented to senate for approval.
- 4.3 The unit of credit for a course is the credit unit, one credit unit being when a class meets for one hour every week for one semester in a lecture or tutorial, or for 3hours every week in practical in the laboratory, workshop or field.

- 4.4 Each course carries 1 to 6 credit units and its duration is on semester.
- 4.5 The normal course load for a full-time student is 15-24 credit units per semester. No student is permitted to register for less than 15 or more than 24 credit units in any semester. This does not apply to students on fieldwork/industrial attachment vacation periods.
- 4.6 Prerequisite and concurrent requirement for courses may be prescribed, but may be waived at the discretion of the faculty teaching the course for which they are prescribed upon the recommendation of the department offering the course.
- 4.7 Every course shall be continuously assessed, and examined at the end of the semester in which it is given.
- 4.8 Resit examinations have no place in the course credit system and are not permitted.
- 4.9 Students are required to obtain a minimum of 75% attendance at lectures/tutorials and or laboratory practice to be eligible for examination in the course(s).

5. GENERAL REQUIREMENTS FOR A DEGREE PROGRAMME

5.1 Programme

5.1.1 To obtain a degree in the University of Port Harcourt, students must complete the approved programme of study in their department, and all courses which the programmes specified must be passed. All students are urged to familiarize themselves with the specific requirement for a Bachelor's degree in the department as specified in the current brochure for the Department.

- 5.1.2 It is the responsibility of the Department to ensure that copies of a brochure with correct details of all current programmes are available to each set of incoming student.
- 5.2 Students will graduate on the programme which was in effect in the Department at the time they were admitted into the Department.
- 5.3 The pass mark for undergraduate course is 40%.
- 5.4 The minimum requirement for the award of B. Agric degree, is subject to a minimum of a minimum of 150 credit units and a maximum of 210 credit units for the 5-year programme. A well-balanced programme should require between 150 and 210 credit units for the 5-year programme to be taken.
- 5.5 All registered courses other than audited courses, by students must be passed.
- 5.6 When re-registering failed courses, students must not exceed the maximum number of 24 credit units for one semester. Any course which would cause the maximum to be exceeded must be deferred to the following academic year.
- 5.7 Grade points earned at all attempts at a particular course count towards the CGPA.
- 5.9 Students are not allowed to repeat a course which they have passed.
- 5.10 The various kinds of courses available are as follows:

5.10.1 General Studies Courses:

General studies courses are university-wide, and the appropriate combination of courses specified by the students' faculty

5.10.2 Foundation Courses:

Various foundation (or faculty-wide) courses for the first two years of study are prescribed by each faculty. Departments specify the particular foundation courses which their students must take.

5.10.3 Major Discipline courses:

Courses in the major discipline occupy most of the curriculum in the third and subsequent years of the regular four-year structure. All students are advised to be acquainted with their requirements of their faculty and Department.

5.10.4 Community Service Courses

One community service course must be passed.

5.10.5 Elective Courses

Every programme must include some provision for elective courses.

6. ACADEMIC ADVISERS

- 6.1 Every student is attached to an Academic Adviser who is a member of the academic staff and who will advise him/her academic affairs as well as on personal matters. Academic advisers are expected to follow their students' academic progress and provide counselling for them.
- 6.2 It is the duty of the Head of department to assign an academic adviser to each student at the beginning of each session.
- 6.3 Academic advisers should give clear information on the notice-boards about appropriate times and places at which they will be available to students who wish to consult them.

7. REGISTRATION OF COURSES

- 7.1 The period for normal registration is the first week of each academic year, excluding the orientation week.
- 7.2 The period for late registration is then second week of the first semester of the academic year. Late registration will attract a surcharge penalty.
- 7.3 Course registrations is the responsibility of the students' parent department. The Head of Department signs for all the courses registered.
- 7.4 In registering students, the parent department should ensure that students re-register for all previously failed courses in which the programme requires a pass, and meet the prescribed requirement for each course registered; furthermore, that the total credit units registered are not less than 15 nor more than 24 per semester (**cf 4.5 and 5.7**).
- 7.5 Any registration completed after the time specified will be null and void and will not be credited to the student even when he/she has taken and passed an examination in the course.
- 7.6 Students are not allowed to sit for examination in a course for which they have previously registered. Such actions are fraudulent and culprits will be appropriately disciplined.
- 7.7 Any genuine request for late registration must be made through the Head of department, and a late registration fee whose amount is reviewed each year in line with the cost of living, must be paid to the bursary. Forms for late registration will be given out only when the appropriate receipt is documented on the form.

- 7.8 A list of students registered for each course should be kept (see appendix 1). This list should be displayed for one week immediately after the close of registration for necessary corrections.
- 7.9 The parent faculty and the parent department retain one copy of this list and forward the three copies to the Teaching faculty to be distributed thus: one to the Faculty, one to the Department and one to the Course Lecturer. This list becomes the authentic register for the course examination.
- 7.10 For all students, the following forms are returned to the Academic Office: Form MIS-01 9(SIF) for fresh students, MIS-02 (Course Registration Form) and MIS-04 (Fee Form).
- 7.11 Students are encouraged to join their professional associations, but the dues for such associations should not be tied to registration forms.
- 7.12 Application for adding or dropping a course must be made on the prescribed ADD/DROP Form and certified by the registrar after obtaining the approval of the Heads of Department, not later than four weeks before the examination in each semester. Any change of course made by altering the registration form will be null and void.

8.0 AUDITING OF COURSES.

Students may attend a course outside their prescribed programme. The course shall be recorded in their transcript only if they have registered for it with the approval of the Head of department and the Dean of the Faculty and taken the prescribed examination. An audited course shall not be used in calculating the CGPA.

9 CHANGE OF DEGREE PROGRAMME

- 9.1 A student who has been admitted to a degree programme on satisfying the minimum requirements for entry into the University as well as course requirements for the Faculty and Department shall not be allowed to change until he/she has completed the first academic year in the degree programme.
A student awarded a scholarship in a discipline different from that for which he/she is admitted shall be allowed to change Faculty or department to that in which the programme specified by the scholarship Award is available, provided that he/she meets the requirements of the Faculty or Department to which a change is desired.
- 9.2 Application to change faculty shall normally be made by the student concerned through the purchase of the form from Admissions office in the 2nd semester preceding the year of transfer. The form shall be filled by the student and processed by the Department and Faculty not later than 6 weeks of the 1st semester of the year of transfer. The recommendation from the Faculty Board shall be forwarded to the Committee of Provosts and Deans (CPD) for approval. Thereafter, a letter of approval to transfer shall be issued to the student before actual transfer takes place. Any student who transfers before approval by CPD shall be deregistered from the university for irregular transfer. For the purpose of transfer, The JAMB subjects must be relevant to the new programme.
- 9.3 To qualify for transfer into the professional programmes: Medicine, Engineering, and Management sciences, students shall be required to have a CGPA of 4 points or above at the time of application. For a student to qualify for transfer into

other faculties, he/she requires a CGPA of 3.0 points at the time of application. Those from Colleges (CHS) to Science must have the continuation CGPA of 1.0 point. Intra Faculty Transfer should be done by the Faculty Board and the Committee of Provost and Deans informed.

10. INTER UNIVERSITY TRANSFER.

- 10.1 A student from another University may seek a transfer to any of the programmes of the University of Port Harcourt. Such applicants shall purchase a form from Admissions Office on payment of N50, 000 at the Bursary Department. The form shall be duly filled and the former University be requested to forward the transcript of academic record to the Registrar. The Registrar shall refer the request to the Head of Department after the transcript has been authenticated. The HOD after considering the application shall make an appropriate recommendation through the Faculty Board to the Committee of Provosts and Deans (CPD) for approval. Thereafter, a letter of approval to transfer shall be issued to the student before actual transfer. All such applications must be processed before the beginning of an academic year. Irregular transfer is not allowed.
- 10.2 All applicants for Inter-University transfer shall be required to be in good standing in their previous University.
- 10.3 A student who has been suspended or expelled from any University for acts of misconduct shall not be eligible for transfer to the University of Port Harcourt.
- 10.4 The residence requirement shall be a minimum of two years.

11. **TIME TABLES**

- 11.1 The lecture timetable should be released at least two weeks before the first day of lectures. For large classes the different streams shall be allocated same slot on the timetable and the streams taught in parallel classes running at different venues.
- 11.2 Faculty Officers are required to collate information on the number of students registered for each course in their Faculty at the close of registration, and forward it to the Timetable Committee not later than three weeks after the close of registration.
- 11.3 Then examination timetable should be released at least three weeks before the schedule date of the start of examinations.
- 11.4 Examinations involving large classes should be conducted in the first week of examinations. At the time of such examinations no other examination should be scheduled, so as to enable enough space and invigilators to be available. Large classes are defined as University-wide or faculty-wide courses.
- 11.5 Scheduled times and dates for examinations must be adhered to. If it is found necessary to re-schedule an examination, this must be with the permission of the chairman, Timetable Committee and the Provost and Dean of Faculty.
- 11.6 Because of the constraints of space, examinations are currently (1997) scheduled to last for three weeks. As soon as adequate classroom space is available this should be reduced to two weeks.

12 **TEACHING**

- 12.1 Large classes shall be co-taught and no class should exceed 500. The assignment of lecturers to teach the different streams of students in any of these large classes shall be done at properly constituted departmental meeting of the parent department of the course.
- 12.2 The co-ordination of the teaching of Faculty and University-wide courses involving fresh men should be restricted to senior academic staff not below the rank of Senior Lecturer.
- 12.3 The Heads of Department is to ensure that lecturers take their teaching assignment seriously. In particular, course outlines based on the approved course description must be made available to students free of charge at the commencement of lectures.
- 12.4 Continuous assessments normally comprise of 30% of the marks for the course, but may be up to 60% for courses of practical nature. **Continuous assessment must be administered during the teaching period and NOT as a test immediately preceding the examination nor as an extra question on the examination paper.**

13. **GRADING SYSTEM**

13.1: The following systems of grade Points shall be used.

MARK/ SCORE	LETTER NOATATION	GRADE POINT	
70% and above	A	5.00	
60-69	B	4.00	
50-59	C	3.00	
45-49	D	2.00	
40-44	E	1.00	
0-39	F	0.00	

13.2 Students are obliged to sit for examinations in all registered courses. Any student who fails to sit for a course examination without satisfactory reason earns the grade of "F".

14. **COMPUTATION OF GRADE POINT AVERAGE**

14.1 Every course carries a fixed number of Credit Units (CU), one credit unit being when a class meets for one hour every week for one semester, or three hours every week in the laboratory, workshop or field.

14.2 Quality points (QP) are derived by multiplying the credit units by the Grade Points earned by the student: e.g. in a course with three credit units in which a student earned a B with 4 Grade Points, the Quality Points are $3 \times 4 = 12$.

- 14.3 Grade Point Average (GPA) is derived by dividing the Quality Points for the semester by the Credit Units for the semester: e.g. in a semester where the student earned 56 Quality Points for 18 Credit Units, the GPA is $56/18 = 3.11$
- 14.4 Cumulative Grade Point Average (CGPA) is derived by adding the Total Quality Points(TQP) to date and dividing by the Total Credit units (TCU) to date: e.g. if the TQP are 228 and the TCU are 68, then the CGPA is $228/68 = 3.35$.
- 14.5 Detailed example of how to calculate GPA and CGPA is shown below:

FIRST YEAR, SEMESTER ONE

Course	Credit unit	Letter notation	Grade point	Quality points	Grade point average (gpa)	Cumulative grade point average
APC 100	3	B	4	12	QP = 66	TQP = 66
APC 101	2	C	3	6	CU = 20	TCU = 17
APC 102	1	C	3	3	GPA $66/17$ $= \underline{3.88}$	CGPA= $66/17$ $= \underline{3.88}$
APC 103	4	B	4	16		
APC 104	5	A	5	2.5		
APC 105	2	D	2	4		
TOTAL	17			66		

FIRST YEAR, SEMESTER TWO.

Course	Credit unit	Letter notation	Grade point	Quality points	Grade point average(gpa)	Cumulative grade point average
APC 106	5	E	1	5	QP = 48	TQP = 114
APC 107	4	D	2	8	CU = 20	TCU = 37
APC 108	5	B	4	20	GPA 48/20 = <u>2.40</u>	CGPA=114/37 = <u>3.08</u>
APC 109	3	F	0	0		
APC 110	3	A	5	15		
TOTAL	20			48		

SECOND YEAR, SEMESTER ONE

Course	Credit unit	Letter notation	Grade point	Quality points	Grade point average(gpa)	Cumulative grade point average
APC 210	2	E	1	2	QP = 61	TQP = 175
APC 211	3	C	3	9	CU = 18	TCU = 55
APC 212	5	B	4	20	GPA 61/18 = <u>3.18</u>	CGPA=175/55 = <u>3.18</u>
APC 213	5	C	3	15		
APC 214	3	A	5	15		
TOTAL	18			61		

SECOND YEAR, SEMESTER TWO

Course	Credit unit	Letter notation	Grade point	Quality points	Grade point average(gpa)	Cumulative grade point average
APC215	3	B	4	12	QP = 59	TQP = 234
APC216	4	C	3	12	CU = 20	TCU = 75
APC217	5	B	4	20	GPA 59/20 = <u>2.95</u>	CGPA=234/75 = <u>3.12</u>
APC218	2	F	0	0		
APC219	3	C	3	9		
APC 109	3	D	2	6		
TOTAL	20			59		

Observe how the course APC 109 was failed in Year 1, Semester 2, and computed with F=0 Year I. It was then re-registered and computed with D=2 in Year II, Semester 2. The old grade is not replaced by the new one.

THIRD YEAR, SEMESTER ONE

Course	Credit unit	Letter notation	Grade point	Quality points	Grade point average(gpa)	Cumulative grade point average
APC 300	3	B	4	12	QP = 51	TQP = 285
APC 301	3	C	3	9	CU = 17	TCU = 92
APC 302	3	F	0	0	GPA 51/17 = <u>3.00</u>	CGPA=285/92 = <u>3.10</u>
APC 303	4	B	4	16		
APC 304	2	A	5	10		
APC 305	2	D	2	4		
TOTAL	17			51		

THIRD YEAR, SEMESTER TWO

Course	Credit unit	Letter notation	Grade point	Quality points	Grade point average(gpa)	Cumulative grade point average
APC 301	3	D	2	6	QP = 55	TQP = 340
APC 311	3	C	3	9	CU = 21	TCU = 113
APC 312	3	E	1	3	GPA 55/21 = <u>2.62</u>	CGPA=340/113 = <u>3.01</u>
APC 313	4	B	4	16		
APC 314	3	A	5	15		
APC 315	3	F	0	0		
APC 218	2	C	3	6		
TOTAL	21			55		

FOURTH YEAR, FIRST SEMESTER

Course	Credit unit	Letter notation	Grade point	Quality points	Grade point average(GPA)	Cumulative grade point average
APC 400	3	A	5	15	QP = 63	TQP = 403
APC 401	3	C	3	9	CU = 20	TCU = 133
APC 402	3	B	4	12	GPA 63/20 = <u>3.15</u>	CGPA=403/13 3= <u>3.03</u>
APC 403	4	C	3	12		
APC 404	2	E	1	2		
APC 405	2	D	2	4		
APC 302	3	C	3	9		
TOTAL	20			63		

FOURTH YEAR, SECOND SEMESTER

Course	Credit unit	Letter notation	Grade point	Quality points	Grade point average(GPA)	Cumulative grade point average
APC 410	3	B	4	12	QP = 88	TQP = 491
APC 411	3	D	2	6	CU = 25	TCU = 158
APC 412	3	C	3	9	GPA 88/25 = <u>3.52</u>	CGPA=491/158= <u>3.12</u>
APC 413	4	B	4	16		
APC 414	2	A	5	15		
APC 415	2	B	4	24		
APC 315	3	D	2	6		
TOTAL	25			88		

FIFTH YEAR, FIRST SEMESTER ETC

- 14.6 Grades obtained in all approved courses of a student's prescribed programme, excluding audited courses, shall be used to compute the GPA.
- 14.7 With the reduction in Total credit Units for graduation as directed by NUC, no student is allowed to over register for courses.
- 14.8 When a student is registered for a course but the result is unavailable, due to no fault of the student, no result will be recorded for that course and the student will re-register for it in the next academic year.
- 14.9 When a student transfers from one Faculty to another, only the grades obtained in the courses in the new prescribed programme of study will be used to compute the CGPA.

Courses which were completed before the change of programme and which are not part of the new prescribed programme will be treated as audited courses.

15 CONTINUATION, PROBATION AND WITHDRAWAL

15.1 Continuation requirement

The continuation requirement in the University is a CGPA of 1.00 at the end of every academic year.

15.2 Probation

Probation is a status granted to a student whose academic performance falls below an acceptable standard. A student whose Cumulative Grade Point Average is below 1.00 at the end of a particular year of study earns a period of probation for one academic session.

15.3 Limitation of registration

Students on probation may not register for more than 15 units per semester. The purpose of the restriction is to give the student a chance to concentrate on improving his/her performance and thus raising their CGPA.

15.4 Warning of danger of probation

Students should be warned by their department if at the end of any semester their CGPA falls below 1.00.

15.5 Repeating failed course unit (s)

Subject to the condition for withdrawal or probation, a student must repeat the failed course unit(s) at the next available opportunity. Provided that the total number of credit units carried

during that semester does not exceed 24, and the grade Points earned at all attempts shall count towards the CGPA.

15.6 Temporary Withdrawal from study

Any student who takes ill and goes into hospital should write and inform the university about the sickness, and when discharged should write to inform the university and attach the medical report(s) to the application of resumption of study. The medical papers should be authenticated by the Health Services Department. Any student who takes off without permission or informing the university and stays away for more than two years should regard himself or herself as being out of the programme.

15.7 Withdrawal

A student whose Cumulative Grade Point Average is below 1.00 at the end of one year's probation shall be required to withdraw from the programme. However, in order to minimize waste of human resources, consideration may be given to withdrawal from the programme of study and possible transfer to other programme within the university; provided the student meets the departmental and Faculty requirements with regards to relevant credits and JAMB score. The Faculty/Department must be willing to accept the student.

15.8 Duration of Degree Programmes

A student who, after the maximum length of time allowed for a degree programme, has not obtained a degree, shall have his degree result calculated on pass out/fail out basis. The maximum length of time that a student shall be permitted to spend on a standard 5-year programme shall be 7 years. It is mandatory that a student presents and defends his project to earn a degree.

16. CLASSIFICATION OF DEGREES

16.1 The degree shall be awarded with 1st, 2nd Upper, 2nd Lower, or 3rd Class Honours degree. The Cumulative Grade Point Average for these classes shall be:

CLASS OF DEGREE	Cumulative Grade Point Average
1 st Class	4.50-5.00
2 nd Class Upper	3.50-4.49
2 nd Class Lower	2.40-3.49
3 rd Class	1.50-2.39
Pass	1.00-1.49

17. EXAMINATION REGULATIONS

17.1 Examiners should ensure that question papers are prepared under conditions of maximum security and are ready in time. For all examinations, well-packaged question papers must be accompanied by a list of supervisors/Invigilators and the relevant forms. The examiners should ensure that the question papers, adequately packaged and sealed, are submitted to the supervisor at least one hour before the start of the examination.

17.2 Subject only to administrative supervision by the office of the Provost/Dean/Director; the conduct of course examinations is the responsibility of Head of Department. The Head of Department ensures that examination questions are moderated.

17.3 For each examination, there should be a supervisor and invigilator in a ratio of at least one invigilator to 50 students, including both male and female invigilators.

- 17.4 It is the responsibility of the parent department to appoint supervisors and invigilators. The list should be forwarded to the head of the teaching department not later than one week before the commencement of semester examinations. Students should be seated according to their Departments and they should be invigilated by academic staff from their departments.
- 17.5 Supervisors should be appointed from the rank of Senior Lecturers and above and invigilators should be other members of academic staff. Part-time teachers, where necessary are also regarded as Internal Examiners.
- 17.6 Supervisors must identify and check students into the examination hall using the authenticated register of students for that course. The students must show the invigilators his/her registration/identity card on entry to every examination. He/she must leave these on the desk throughout the examination for easy inspection by the invigilator.
- 17.7 All examination scripts used by the students must be endorsed by the supervisor at least 30 minutes after the commencement of the examination.
- 17.8 The invigilator must ensure that no student removes from the examination venue any paper or examination material except the printed question paper where it is allowed. Answer booklets are the property of the university and must not be in the possession of students.
- 17.9 During examinations security must be stepped up, especially around examination centres, to ensure the safety of staff and students. The security department is to ensure

that no person not involved in the examinations is allowed to loiter around the hall.

- 17.10 No unregistered student is allowed to take any examination.
- 17.11 A student should be in the examination room at least 30 minutes before the start of the examination. A student who is up to 30 minutes late shall be admitted, but shall not be given any extra time. A student who arrives more than 30 minutes after the start of the examination shall not be admitted. A student may be allowed to leave the examination room temporarily before the end of the examination, but must NOT:
- a. Do so during the first hour of the examination except in cases of emergency like illness;
 - b. Do so unaccompanied OR with his scripts.
- 17.12 All students must write their name and matriculation number and sign the attendance register within the first hour of the examination.
- 17.13 All students must write their number (not name) at the appropriate places on the cover and pages of the answer booklet.
- 17.14 No student shall keep any handbag, briefcase, books, notebooks, or paper near him/her during the examination.
- 17.15 No student shall directly or indirectly give or accept any assistance during the examination, including lending, borrowing any materials.

- 17.16 No student shall continue when, at the end of the allotted time, the invigilators orders all students to stop writing.
- 17.17 A student shall avoid noise making and/or communicating with any other student or with any other person, except with the Invigilator if necessary.
- 17.18 Students who disrupt an examination at any venue shall have their 'examination cancelled', and they will be required to re-register for the course.
- 17.19 At the end of the examination, the supervisor/invigilator should ensure that the scripts are checked, properly packaged, and returned along with relevant forms to the chief examiner.
- 17.20 A member of staff who fails to turn up for invigilation shall lose a monthly examination allowance for each offence and be queried for this act the first time. If this is repeated during any other period of examination the member of staff will lose the monthly allowance for each offence, and will in addition lose the next promotion and be warned in writing by the Vice-Chancellor.
- 17.21 The Provost/Dean is responsible for reporting to the Vice-Chancellor any defaulting invigilator.
- 17.22 These examination regulations apply to any student studying for the award of University of Port Harcourt degrees, diplomas and certificates, and where appropriate to all staff.

18. **RESULTS**

- 18.1 Results should be returned in quadruplicate distributed as follows: a copy to the course lecturer, a copy to the Head of Department, two copies to the Dean, who signs and returns and return one copy of the mark sheet to the Department.
- 18.2 Summary of results for all courses taken in the Department with the date of departmental meeting reflected on them shall be presented to the Extra-Ordinary meeting of the Senate five weeks following the conclusion of the semester and degree examinations. Lecturers who fail to meet the deadline shall face strict sanctions of salary suspension. The Dean shall report such lecturer to the Vice-Chancellor for the necessary sanctions to be applied.
- 18.3 A moderator of an examination must have access to the script and the course make sheet must show an itemized distribution of the score. All results must be published provisionally not later than 24 hours after the Faculty Board had considered them.
- 18.4 Computation of results should be restricted to academic staff.
- 18.5 Examiners should ensure the security of scripts, and the scripts should normally be returned to the Head of Department after one year. Scripts are not to be disposed off until after five years.
- 18.6 Faculty Officers, Head of Departments, and Provost/Deans/Directors should ensure that mark sheets and results are treated as high security documents. A copy of the mark sheets of all the courses should be sent to the Registrar for preparation of students' transcripts.

19. **PROCEDURE FOR CHANGE OF RESULT**

- 19.1 Results may be changed as a result of a review or as the result of the discovery of an error or fraudulent change in the recording of either semester or degree results.
- 19.2 No result/grade approved by the Faculty Board shall be changed without reference to the Faculty Board.
- 19.3 No result/grade approved by the Senate shall be changed without reference to the Senate.
- 19.4 Any application for a change of grade must be made in writing appropriately routed; giving clearly defined reasons for the change.
- 19.5 Where the change is suspected to be the result of fraud, it should be investigated at the appropriate level and a recommendation made to Senate.
- 19.6 The application must be personal, i.e. an appeal by someone for the review of someone else's script shall not be entertained.
- 19.7 No group appeal by candidates involved in the examination in question, (or any other group of persons) shall be entertained.

20. **PROCEDURE FOR INVESTIGATION OF EXAMINATION MALPRACTICES**

- 20.1 Definition Examination Malpractice.

Examination malpractice shall be defined as all forms of cheating which directly or indirectly falsify the ability of a student. These shall include cheating within an examination hall, cheating outside

an examination hall, and any involvement in all illegal examination-related offences. Forms of cheating are categorized as follows;

A. Cheating within an examination hall/room

1. Copying from one another/exchanging questions/answer sheets.
2. Bringing in prepared answers, copying from textbooks, notebooks, laboratory specimens or any other instructional aids smuggled into the examination hall.
3. Collaboration with an invigilator/lecturer where it involves the lecturer providing written/oral answers to a student in the examination hall.
4. Oral/written communication between/amongst students.
5. Bringing in prepared answers written on any part of the body.
6. Receiving information, whether written or oral, from any person(s) outside an examination hall.
7. Refusal to stop writing at the end of the examination.
8. Impersonation
9. Non-submission of answer scripts at the end of an examination.
10. Illegal removal of an answer script from an examination hall.
11. Copying laboratory material or field work reports and/or term paper or others.
12. Manipulation of registration forms in order to sit for an examination for which the student is not qualified.
13. Sitting for an examination which the student is not qualified as a result of manipulation of registration.
14. Colluding with a medical doctor in order to obtain an excused duty/medical certificates on grounds of feigned illness.

B. Cheating inside the examination hall/room

1. Plagiarism is a form of examination malpractice and should be investigated and punished. Plagiarism is the use of

another person's work without appropriate acknowledgement both in the text and in the references at the end.

2. Colluding with a member to obtain or on his own initiative obtaining set questions or answers beforehand.
3. Colluding with a member of staff to modify or on his/her own initiative modifying students' score cards, answers scripts and/or mark sheets.
4. Colluding with a member of staff in other to submit a new, prepared answer scripts as a substitute for the original script after the examination.
5. Writing of projects, laboratory and/or field reports on behalf of a student by a member of staff.
6. Soliciting for help after an extermination
7. Secretly breaking into a staff office or departmental office in order to obtain question papers, answer scripts or mark sheets, or substituting a fresh answer script for the original script.
8. Refusing to co-operate with the faculty Investigating Panel or the Senate Committee on Examinations Malpractices in the investigation of alleged examination malpractices.

C. Related offences

1. Producing a fake medical certificate
2. Assault and intimidation of the invigilator within or outside the examination hall.

3. Attempting to destroy and/or destroying evidence of examination malpractice.
4. Intimidation/threats to extort sex/money/other favours from students by a member of staff in exchange for grades.

20.2 Investigation of Examination Malpractice

20.2.1 Any unauthorized material found in the possession of a student shall be seized by the invigilator after the student has signed it, acknowledging that it was retrieved from him/her. Refusal to sign is tantamount to acceptance of guilt.

20.2.2 Where the student refuses to sign, the invigilator should make a clear statement on the answer sheet.

20.2.3 The student shall, however, not be prevented from finishing the examination.

20.2.4 The invigilator shall, immediately after the examination, submit a written report to the Head of Department conducting the examination.

20.2.5 The report shall include all necessary information, following the format given in Appendix 4.

20.2.6 The department conducting the examination shall set up a committee/panel to examine the merit of the case.

20.2.7 If the Departmental Board feels that a prima facie case has been established, the cases shall be presented to the Faculty Board which shall appoint a panel to investigate the case and report back to the Faculty.

20.2.8 If the faculty is satisfied that a case has been established, the case should be reported to the Senate Committee on Examination Malpractices (SCEM).

20.2.9 The Senate Committee on Examination Malpractices (SCEM) shall investigate the case and report to Senate for decision. The investigation of examination malpractices should take as much time as it takes to dispose off the matter, but it must not go beyond the end of the semester following the one in which the offence was allegedly committed. Meanwhile, the student allegedly involved in an examination malpractice shall be allowed to register for courses and take examinations in them. But results of the courses shall not be released by the parent or any other department until investigation has been completed and his/her innocence established by Senate.

21. PUNISHMENT FOR EXAMINATION MALPRACTICE

21.1 (a) A student found guilty of examination malpractice in section **A**, has the result in the course cancelled and suspended for one semester for a first offence. Suspension for one session is the punishment for a second offence.

(b) A student found guilty of any form of examination malpractice in section **B**, has the result in the course cancelled and is suspended for the first offence. Expulsion from the university is the punishment for a second offence.

(c) A student found guilty of any offence in section **C**, is expelled from the University.

(d) Member of staff involved in aiding and abetting students in examination malpractice should be made to appear before an investigation panel. If the member of staff is found guilty, the report should be sent to the appropriate Disciplinary Committee.

21.2 This decision should be communicated to all students and their sponsors before the commencement of each session. The information should be pasted on all notice boards throughout the

university and should also be contained in each faculty prospectus so as to give it the widest possible publicity.

21.3 The decision should take effect immediately after its publication.

21.4 Member of staff involved in aiding and abetting students in examination malpractice should be made to appear before an investigation panel. If the member of staff is found guilty, the report should be sent to the appropriate Disciplinary Committee.

21.5 For students involved in an examination malpractice and proven guilty, Senate should take the ultimate decision, while for staff, the appropriate Disciplinary Committee (as prescribed in the conditions of service) should forward its recommendation to Council.

22. **SECRET SOCIETIES/CULT**

22.1 Secret societies/cults are anti-social and are banned by the University. Any student proved to belong to a secret society will be expelled.

APPENDIX 1

List of students registered for a course

Course number:..... Session.....

Teaching DepartmentCourse title.....

Teaching faculty..... Parent department.....

Parent faculty.....

	For use during registration				For use during examination	
S/N	Mat. No.	Name	Gender	Signature	Mat No.	Signature
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

APPENDIX 2

Examination supervisor's report

Course no:.....

Course title.....

Date of examination.....

Venues used.....

The invigilators allocated	The invigilators present

(Continue on back if necessary)

Total No. of students present:.....

Total No. of scripts submitted.....

Comments on the examination.....

.....

.....

.....

(Continue on back if necessary)

Name of supervisor.....Sign.....

APPENDIX 3

EXAMINATION SUPERVISOR'S REPORT

Course number:.....
Course title.....
Date of examination.....
Venue of examination.....
Time examination started.....
Time examination ended.....
Number of students.....
Number of answer booklets collected
Number of answer booklets used
Number of answer booklets returned
Comments on the examination.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

CONTINUE ON BACK IF NECESSARY

NAME OF INVIGILATOR..... SIGN.....

APPENDIX 4
REPORT OF EXAMINATION MALPRACTICE

Name of Student/Staff.....
Student's Registration/Matriculation No.:.....
Students/Staff's Department.....
Course Number (If applicable).....
Venue of Examination.....
Location of Examination.....
Date and Time of Examination (if applicable).....
Examination Offence (with evidence/statement, if any).....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

(CONTINUE ON BACK IF NECESSARY)

Chief Invigilator/Invigilator's Signature.....
Witness' Signature (If any).....
Students' Comment (if possible).....
.....
.....
.....
.....

(CONTINUE ON BACK IF NECESSARY)

STUDENT'S SIGNATURE (IF POSSIBLE).....
DATE:.....

APPENDIX 5

UNIVERSITY OF PORT HARCOURT

ADD/DROP COURSE REGISTRATION FORM

.....SESSION

To be completed in quadruplicate: (1) Dean's Office (2) Exams & Records (3) Department and (4) Students copy

Name.....
(Surname first) (Other names)

Matriculation No..... Sex.....

Department.....

Year of study.....

COURSES TO BE DROPPED

Serial No.	Course No.	Course Title	Credit Units	Lecturer's Signature & Date
1				
2				
3				
4				

COURSES TO BE ADDED

Serial No.	Course No.	Course Title	Credit Units	Lecturer's Signature & Date
1				
2				
3				
4				

The above changes are approved

Name Signature Date

Academic adviser.....

Head of Department.....

Dean.....