100 LEVEL B. SC. CROP SCIENCE (CCMAS), FACULTY OF AGRICULTURE

First Semester

Course	Code	Title	Units	Status	LH	PH
GST	101	Communication in English	2	C	15	45
GST	102	Philosophy, Logic and Human Existence	2	C	30	
D/GST	103	Delsu Culture and Ethics	2	C	30	
CHM	101	General Chemistry I (General and Physical Chemistry)	2	C	30	
CHM	102	General Chemistry Practical I	1	C		45
PHY	101	General Physics I (Mechanics)	2	C	30	
PHY	103	General Physics Practical I	1	C		45
MTH	101	Elementary Mathematics I (Algebra and Trig.)	2	C	30	
MTH	102	Elementary Mathematics II (Calculus)	2	C	30	
BIO	101	General Biology I (Introduction to Animal and Plant Biology I)	2	C	30	
BIO	102	General Biology Practical I	1	C		45
AGG	101	Introduction to Agriculture I	2	C	30	
Total			**21**			

Second Semester

Course	Code	Title	Units	Status	LH	PH
GST	111	Nigerian Peoples and Culture	2	C	30	
GST	112	Everyday Science and Technology	2	C	30	
GST	113	Peace and Conflict Resolution	2	C	30	
AGG	111	Introduction to Agriculture II	2	C	30	
CHM	111	General Chemistry II (Organic and Inorganic Chemistry)	2	C	30	
CHM	112	General Chemistry Practical II	1	C		45
PHY	111	General Physics III (Electricity and Magnetism)	2	C	30	
PHY	113	General Practical Physics II	1	C		45
BIO	111	General Biology II (Introduction to Animal and Plant Biology II)	2	C	30	
BIO	112	General Biology Practical II	1	C		45
Total			**17**			
Total Unit			**38**			

200 LEVEL B. SC. CROP SCIENCE (CCMAS), FACULTY OF AGRICULTURE

First Semester

Course	Code	Title	Units	Status	LH	PH
CPS	201	Introduction to Crop Production	2	C	30	
AGR	201	Introduction to Agric. Economics, Extension and Rural Sociology	2	C	30	
ANS	201	Introduction to Animal Production	2	C	30	
AGR	202	Principles of Family and Consumer Sciences, Food Science and Technology	2	C	30	
AGY	201	Agro-meteorology and Biogeography and Climate Change	2	C	15	45
SOS	201	Principles of Soil Science	2	C	30	
CPS	202	Introduction to computer Application in Crop Science	2	C	15	45
CPS	203	Principles of Crop Physiology	2	C	30	
D/CPS	204	Crop Anatomy	2	C	30	
Total			**18**			

Second Semester

Course	Code	Title	Units	Status	LH	PH
CES	211	Entrepreneurship and Innovation	2	C	15	45
CPS	211	Arable Crop Production	2	C	30	
CPS	212	Farm Mechanization Practices	2	C		45
D/CPS	213	Crop Taxonomy	2	C	15	45
D/CPS	214	Principles of Crop Propagation	2	C	15	45
D/CPS	215	Agricultural Biotechnology	2	C	30	
D/CPS	216	Introduction to Hydroponics	2	C	15	45
D/CPS	217	Herbicides Storage and Safety	2	C	30	
D/CPS	218	Introduction to farming Systems	2	C	30	
Total			**18**			
Total Unit			**36**			

300 LEVEL B. SC. CROP SCIENCE (CCMAS), FACULTY OF AGRICULTURE

First Semester

Course	Code	Title	Units	Status	LH	PH
CPS	301	Permanent Crop Production	2	C		
CPS	302	Crop Pests and Diseases	2	C		
CPS	303	Crop Genetics and Breeding	2	C		
CPS	304	Crop Processing and Storage	1	C		
CPS	305	Vegetables and Orchard Management	1	C		
CPS	306	Basic Statistics and Experimental Design	2	C		
D/CPS	307	Neglected and Underutilized Crops	2	C		
D/CPS	308	Micropropagation	2	C		
D/CPS	309	Neglected and Underutilized Crops	2	C		
D/AGY	301	Organic Agriculture	2	C		
Total			**18**			

Second Semester

Course	Code	Title	Units	Status	LH	PH
CPS	310	SIWES	12	C		
D/CPS	311	Report Writing	3	C		
Total			**15**			
Total Unit			**33**			

400 LEVEL B. SC. CROP SCIENCE (CCMAS), FACULTY OF AGRICULTURE

First Semester

Course	Code	Title	Units	Status	LH	PH
CPS	400	Seminar	2	C		15
CPS	401	Vegetable crop production	2	C	15	45
CPS	402	Seed production Technology	2	C	15	45
CPS	403	Methods of Field Experimentation	2	C	15	45
CPS	404	Advanced crop protection	2	C	15	45
CPS	405	Weed Science and control	2	C	15	45
D/CPS	406	Pesticides and their Application	2	C	15	45
D/CPS	407	Forage and Fodder Crop Production	2	C	15	45
D/CPS	408	Research Methods in Crop Science	2	C	15	45
D/CPS	409	Seed Production Technology	2	C	15	45
Total			**20**			

Second Semester

Course	Code	Title	Units	Status	LH	PH
CES	312	Venture Creation	2	C	30	
CPS	410	Research Project	6	C		180
CPS	411	Soil fertility management and crop nutrition	2	C	15	45
CPS	412	Irrigation practices in crop production	2	C	15	45
CPS	413	Post-harvest physiology and produce storage	2	C	15	45
D/CPS	414	Environmental Horticulture	2	C	15	45
D/CPS	415	Crop Pathology	2	C	15	45
Total			**18**			
Total Unit			**38**			

AGY 201: Agro-meteorology and Biogeography and Climate Change

Basic definitions and explanations in climatology and biogeography. The principles, aims and scope of climatology and biogeography. Climatological problems and investigation methods. Relationships with meteorology, biogeography and hydrology. Biodiversity and ecosystem sustainability. Principles of bio-resource conservation. Climatological data processing methods; basic factors of climate formation, influence of relief on climate and plants. Geographical distribution of climatic elements, plants, and animals. Climate and soil. The concept of adaptation in plants and animals. Classification of climates and biogeography of the earth. The elements and control of climate and weather and the dynamics o the earth's atmosphere. Radiation and heating of the atmospheric systems, atmospheric moisture, and the dynamics of pressure and wind systems. Condensation and precipitation processes. The tropical climate, relation between agriculture and climate with reference to crop, livestock; irrigation, pest and diseases. Climate change and variation characteristics, impacts and adaptations, the importance of common short (e.g. august break, harmattan) and long seasons (dry and rainy seasons) on agriculture.

CPS 201: Introduction to Crop Production

Definitions of the terms, crops, and plants (including weeds). Importance of crops and plants to mankind. Origin of different types of crops in tropical, sub-tropical and temperate climatic regions and introduction of crop types to other lands. Botany and basis for classification and/or grouping of crops. Descriptions of various types of crops (grains and legumes, cereal crops, root and tuber crops, tree crops, vegetables, ornamentals, etc.). Description (including diagrams) of crop growth cycle. Seeds and seed management and home gardening. Elements of crop husbandry and end-use technologies.

Definitions of the terms, soil, and land. Elements of soil science and soil management. Importance of soils to mankind. Origin of soils. Jenny's factors and processes of soil formation. Descriptions (including diagrams) of the soil profile. The composition(s) of a normal soil. Soil types and basis for classification/grouping of soils. The soil textural triangle. Soil as a medium for plant growth and concept of hydroponics. Soil fertility versus soil productivity. Soil conservation versus soil degradation. Interactive effects of soil characteristics on plants and animals. Soil water use and soil water balance.

CPS 202: Introduction to Computer Application in Crop Science

Computers and applications in the modern world; Information, Communication and Technology (ICT) revolution and applications in Soil Science, Agriculture and Environment. Basic Computing: Microsoft Word Processing and Applications, Spreadsheets, Power Point Presentations. Data presentations and Management; Computers in Crop Analysis; Computers in biometrics,; Computers in Modeling Crop growth Production and Agroecosystem Systems. Computers and the Internet Services-Geographic Information Systems, Google Earth, etc.

CPS 203: Principles of Crop Physiology

Crop seed germination and dormancy. Growth juvenility, maturation, and dormancy. Environmental effect on translocation and metabolic processes in crop plants. Moisture needs and moisture stress effects. Temperature, light and solar radiation effects on growth. Photosynthesis and assimilate partitioning determinants. Growth regulators (growth hormones) and their manifestations. Growth analysis, growth indices and their estimation. Concept of growth and development.

D/CPS 204: Crop Anatomy

Cell biology, cell and cell types, , meristematic tissues, theories of shoot-apex organization and root apex organization, simple tissues-parenchyma, collenchyma, sclerenchyma; complex tissues-xylem, phloem, special tissues, the tissue system-epidermal, ground and vascular tissue systems, Comparative anatomy of

major plant organs-stems, roots and leaves. Secondary growth of dicot stem, lenticels, secondary growth in monocots

CPS 211: Arable Crop Production
Origin, distribution, soil, and climatic requirements for classes of arable crops, specifically cereals, legumes, root crops, fibre crops, vegetables, and other important arable crops in Nigeria. Concept of improved crop varieties and the importance in crop productivity. Production practices, harvesting, utilization, processing, storage, and economic aspects of some selected major arable crops.

CPS 212: Farm Mechanization Practices
Familiarization with farm machines. Farm implements, their uses and coupling methods practically demonstrated. Tractor operation for basic field operations – ploughing, harrowing, and ridging. Involvement in equipment and tractor routine maintenance activities

D/CPS 213: Crop Taxonomy
Introduction to the theory, methods and practice of the taxonomy of crops, Classification, evolutionary history, botanical nomenclature, agricultural nomenclature, ecological nomenclature; collecting and preserving plants, and traditional uses of plants by local peoples, Characteristics, distribution, economic importance and local examples of fabaceae, poaceae, compositae, Dioscoreaceae, Rutaceae; use of plant keys. herbarium plant specimens

D/CPS 214: Principles of Crop Propagation
Definition of propagation, Types of propagation (seeds and vegetative materials), Principles, methods and practices employed in the propagation of plants, emphasizing anatomical features and physiological principles involved in sexual propagation (seeds) and asexual propagation (division, cuttings, budding, grafting, etc.), Natural methods of vegetative propagation, General handling of propagules; propagation structures and facilities, and techniques, Choice of quality planting materials and factors affecting planting materials, Selection of planting materials for specific purposes, effects of wounding, hormone concentration and hormone formulation on rooting

D/CPS 215 Agricultural Biotechnology
Definition of Agricultural biotechnology, importance of biotechnology, role of genes in biotechnology, RNA and DNA. Techniques in genetic engineering. Application of biotechnology in Crop Science

D/CPS 216 Introduction to Hydroponics
Hydroponics and its importance; define hydroponics, History of hydroponics, Advantages of hydroponics over conventional farming, Constraints associated with hydroponics; Location and orientation for your hydroponics, Factors to be considered in siting hydroponics, The screen house orientation; Environmental hygiene, Fumigation protocol, Disinfection protocol, Water treatment, General screen house management, fertigation and irrigation preparation and scheduling, Nutrient preparation, fertigation regimes; Factors that affect fertigation in hydroponics, Nutrient vitals, Water vitals, Temperature; Types of hydroponics; Substrate treatments; Planting and routine maintenance; Harvesting; Profitability estimation; System recycling

D/CPS 217 Herbicides Storage and Safety
Meaning of herbicides, types of herbicides, Toxicity of herbicides, Herbicide toxicology, Labelling of herbicides, Packaging of herbicides and hazards during packaging, Handling of herbicides, Reduction of the risks of herbicides use, Causes of herbicide hazards, Reduction of herbicide hazards, Prevention of hazards during spraying, Causes of contamination in air, water and soil, measures for prevention of herbicide contamination and build up in air, water and soil, preventing herbicide contamination, Herbicide disposal.

D/CPS 218: Introduction to Farming Systems

Meaning of Farming systems; influence of tropical climate environments on farming systems in practiced by farmers in Delta State, . Terminology classification. Shifting cultivation and bush fallowing, permanent and semi-permanent crop production, wetland and crop cultivation principles of conservation agriculture, wetlands and food production, pastoralism, intercropping, crop competition, integrated systems, soil and climatic factors affecting farming systems, Measurement of productivity systems (RY, LER, SPI, etc), farming systems research, crop residue management, cropping practices, agroforestry, Crop residue management for sustainable cropping system, fertility manure for sustainable agriculture in different cropping systems

CPS 301: Permanent Crop Production

Origin, distribution, soil, and climatic requirements of important permanent crops such as cocoa, oil palm, rubber, coffee, coconut, mango, sugar cane, bananas, plantains, citrus, kola, cashew, etc. Production practices, improvement, harvesting, utilization, processing, storage, and economic aspects of some selected permanent perennial crops.

CPS 302: Crop Pests and Diseases

Definition of pests and diseases. Major pests of tropical crops (insects, fungi, viruses, bacteria, and nematodes). Study of specific insect pests of major crops. Symptoms and effects of diseases caused by fungi, viruses, and bacteria. Outline of advantages and limitations of different pest control methods. Integrated pest management approach. Nematode infestation symptoms and control.

CPS 303: Crop Genetics and Breeding

Cell structure and components, chromosomes; structure, number and variations, linkage and crossing over, mutation and genes in population. Multiple alleles, mitosis and meiosis. Theory of evolution. Fundamental principles of inheritance. Mendelism. Introduction to population and quantitative genetics. Objectives and general principles of crop breeding including their application to self-pollinated, cross pollinated and vegetatively propagated crops. General and special methods of selection in inbreeders and out-breeders; compatibility, male sterility. Heterosis. Polyploidy in crop breeding, and mutation breeding

CPS 304: Crop Processing and Storage

Familiarization with crop processing facilities for different crop produce. Engagement in the use of simple and machine-driven processing methods for diverse produce types. Produce packaging methods. Monitoring of changes and developments in stored produce

CPS 305: Vegetables and Orchard Management

Vegetable seeds viability testing, vegetable nursery establishment and management. Orchard crops propagation techniques; transplanting and raising of specific vegetable crops to harvesting stage. Acquisition of skills in orchard management using an existing orchard of any fruit tree.

CPS 306: Basic Statistics and Experimental Design

Basic concepts of statistics, descriptive statistics, measures of central tendency, measures of dispersion, summary statistics. Data collection and processing techniques; statistical inference; Test of significance; F-test, T-test, Chi-Square; Experimental procedures – cause and control of experimental error; Analysis of variance – one way and multiple ways classification; Analysis of co-variance, Regression and correlation analysis; Determination of goodness of fit; research objectives, Research designs – CRD, RCBD, split-plot designs and factorial experiments; Surveys and Questionnaires designs and administration; Mensuration; Field experimentation; Analysis and processing and data (manually and digitally); Mean separation, Statistical interpretation of results.

D/CPS 307 Neglected and Underutilized Crops

Introduction to neglected and underutilized species in Delta State and global, regional and local perspectives on NUS, Understanding challenges involved in policy capacity and funding; Typology, diversity and use of NUS: local and regional examples of NUS and their uses, Species for food and nutrition, Species for biodiversity and environment, Species useful for pharmaceutical products, Species that withstand droughts, floods and pests, The challenges behind the underdevelopment of NUS, Genetic characterization diversity, Genotype, phenotype, dominance relationships, multiple alleles, gene expression, environmental effects of gene expressions, polyploidy, species formation, Geographical distribution and ecological niches of species, Knowledge management, Policy dimensions, Institutional capacity needs, Human resource capacity needs, Health and dietary diversification, Ethnobotany; Principles in domestication and conservation of NUS of plants: Wild and landrace varieties, Participatory processes in selecting species for domestication, Social, cultural and economic considerations (experiences and challenges), Technical aspects: seed/wildlings collection and management, vegetative propagation, nursery development and management, Disease identification and management, pest management, Product management

D/CPS 308 Micropropagation

Introduction to plant tissue culture of crops commonlly cultivated in Delta State: Definition, brief history, principle and significance of tissue culture; Cellular totipotency-- Cytodifferentation: factors affecting vascular tissue differentiation, cell cycle and TE differentiation; Organogenic Differentation: induction, factors affecting shoot bud differentiation;

Laboratory organization: Design and layout for wash area, media preparation, sterilization and storage room, transfer area for aseptic manipulations, Culture rooms, and observation/data collection areas. Labwares, Good laboratory practices, Good safety practices

Instrumentation: Working principle, maintenance and management of following instruments: Laminar air flow, autoclave, distillation unit, pH meter, orbital shaker, microscope, deep freezer, growth chamber Sterilization

Tissue culture media: Introduction, Types of Media and its importance; Preparation of stocks, pH and Buffers and their significance in media. Media Constituents (Vitamins, Unidentified supplements, carbohydrate for energy source, Nitrogen source and organic supplements, complex substances, hormones, Activate charcoal)

Plant hormones: Role of Plant hormones (auxins, cytokinins, abscissic acid, ethylene and Gibberellins) in plant development

Aseptic techniques: Methods of sterilization of equipments, culture media and explants:- Washing and preparation of glassware's, packing and sterilization, media sterilization, surface sterilization, aseptic workstation, precautions to maintain aseptic conditions

D/CPS 309 Medicinal plants

Introduction: Meaning, scope and objectives of medicinal plants in local communities in Delta State; Ethnophytomedica: Traditional wisdom in natural resources utilization: Utilization of medicinal plants by various Nigerian's ethnicity; Nigerian's medicinal plants potentials, Forest as geneplasm for medicinal plants, Potentials of Nigerian medicinal plants according to families, forest formations, habitus, parts that are used, utilization for group of diseases; Problems related to utilization of Nigeria's medicinal plants: Institutional problems, Habitat degradation and forest land conversion, Extinction of local cultures and knowledge, Imbalance supply and demands for medicinal plants, Slow progress of cultivation efforts; Medicinal plants development prospects: medicinal as plants raw materials, medicinal plants utilization in Nigeria, development of traditional pharmacies in Nigeria, availability of Nigerian human resources from various

disciplines, availability of research institutions, opportunities for new medicines' discoveries Conservation: in-situ conservation: protected area management for medicinal plants; harvesting of medicinal plants from nature; restocking of rare species to their original habitat; ex-situ conservation: botanical garden; in vitro conservation; Domestication, Medicinal plants propagation: Propagation and cultivation techniques for wild medicinal plants; selection of priority/ top species; site selection; development of cultivation

D/AGY301: Organic Agriculture
Definition of organic and traditional farming. A comparison of the philosophy, scientific principles and practices of organic and traditional methods of home and market gardens. Major types of horticultural crops grown under organic and traditional farming. Organic farming production system. Importance of organic farming. Peculiarities of organic farming. Concepts of home gardening, market gardening and commercial gardening of horticultural crops in relation to organic and traditional production technologies, bioconversion of wastes to organic manures (composting, vermicomposting, compost tea) organic certification procedures, organic markets and markets requirements in Delta State

CPS 310: SIWES
Practical Students Industrial Work Experience Scheme (SIWES)

D/CPS 311: Report Writing
Scientific writing and farm record practices. Submission of final report on practical year/Students Industrial Work Experience Scheme (SIWES)

400 LEVEL
CPS 400: Seminar
Literature search, proposal writing and presentation, presentation of pre-field and post-field seminars of students research project.

CPS 401: Vegetable crop production
History, definition, classification, and importance of vegetable crops. Ecological distribution of vegetables and fruits in Nigeria. Varieties and adaptation of exotic vegetables and fruits to the Nigerian environment. Types and systems of vegetable and fruit production. Production practices, harvesting, handling, processing, storage, marketing and utilization of vegetables and tropical fruit crops. Methods of plant propagation. Nursery systems, diseases and pests of vegetables and fruit crops. Horticultural machines and equipment. Principles of producing, planting, maintaining ornamental trees, shrubs, perennials and fruits in the nursery, homes, and parks.

CPS 402: Seed production Technology
Structure and nature of seed, functions of parts of seed, seed viability, vigour, dormancy, and deterioration. Methods of breaking seed dormancy, production, processing, drying, treatment, packaging, storage and distribution of improved seed, seed certification. Procedures for field inspections; seed legislation and control. Seed testing procedures. Seed programmes in Nigeria. Seed marketing.

CPS 403: Methods of Field Experimentation
Principles of field experimentation in crop science. Research methodology; experimental plot layout and experimental designs, field survey; normal distribution and sampling; measurements and data analysis. Sources of variation in field experiments. Single factor and factorial experiments. Analysis of variance, data transformation and means separation. Data collation and interpretation. Concept of mean, standard

deviation, standard error, least significant difference, Duncan's multiple range test. Result presentation in tables and figures.

CPS 404: Advanced crop protection
Practical identification of pests and disease pathogens on crop field. Familiarization with and mode of use of pest and disease control equipment. Practical involvement in insect pest management, disease control on diverse crops, nematode management. Practical aspects of phytosanitary.

CPS 405: Weed Science and control
Characteristics, classification, and biology of weeds. Losses due to weeds. Weed control methods and problems associated with them. Classification, chemistry, selectivity, formulation, application, storage, and mode of action of herbicides. Herbicides and environmental interaction. Safety factors in the use of herbicides; basis for herbicidal selectivity. Application equipment and techniques, practical methods of controlling weeds in Nigeria

D/CPS 406: Pesticides and their Application
Meaning of pesticides; types of pesticides; mode of action of pesticides; pesticides use for field crop and stored products in Delta State; residual effects of pesticides in environment (soil and plants); pesticide regulation in the tropics; organic and inorganic pesticides with examples; common insecticides used to control field crops in Niger Delta; market survey of commonly available pesticides in Niger Delta area; impacts of pesticides in the environment; the role of state Government in regulating the indiscriminate use of pesticide; benefits of pesticides usage in the tropics; Alternative/substitute to less toxic conventional pesticides

D/CPS 407: Forage and Fodder Crop Production
Definition of pasture agronomy as a field in crop production. Adaptation and botany of indigenous and introduced pastures and forage plants. Classification of pastures, Characteristics of grasses, legumes and shrubs. Establishment and production of pasture plants, the utilization and maintenance in permanent and temporary pastures, pasture management and improvement, fertilizer application, defoliation of pasture species, pasture harvesting and processing methods, pasture establishment for forage and seed production, forage conservation techniques, weed control in pastures, grazing management systems

D/CPS 408 Research Methods in Crop Science
Principles of scientific experimentation; major experimental designs; and treatment arrangements. Sampling methods: grid system, systematic sampling, random sampling cluster sampling, judgment sampling. sampling procedures and their criteria. Data information gathering; quantitative and qualitative methods of data collection and data analysis. Methods of extrapolation of remote data; data transformation. Elements of scientific writing: Principles of effective communication and technical report writings. Preparation of manuscripts for oral presentations, poster presentations and for publications.

D/CPS 409 Seed Production Technology

CPS 410: Research Project
Each student is expected to choose and execute a special project under a supervisor. Duration of the project is 2 semesters.

CPS 411: Soil fertility management and crop nutrition
Fertility in tropical soils. Soil organic matter; its properties and maintenance. Liming and its soil plant relationship. Nitrogen, potassium, phosphorus, and sulphur contents of the soil. Fertilizers and fertilizer management including types, application methods, rates and timing. Major and trace nutrient elements in crop nutrition. Nutrient absorption and loss routes. Soil fertility management in intensive and extensive cropping system. Role of leguminous crops in soil fertility management.

CPS 412: Irrigation Practices in Crop Production
Forms of irrigation; costs and profitability of irrigation; application of irrigation to different crops. Soil-water-plant-atmosphere relationship; assessment of water requirements for crops including meteorological approach and critical growth stages for water of different field crops; scheduling irrigation for the 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 equipment. Agronomic practices of crops in problem soils; soil erosion and soil drainage under irrigation or under natural rainfall.

CPS 413: Post-Harvest Physiology and Produce Storage
Storage life and harvested fruits, seeds, vegetables and flowers, tropical environment in relation to maturity, ripeness, and senescence. Physical and chemical indices of quality in fruits, seeds, vegetables, flowers, 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 shell 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 equipment for storage and preservation

D/CPS 414 Environmental Horticulture
Definition of floriculture and landscape, Introduction to historical background of floriculture and landscape Delta State. Concepts of landscape - make land look better. Contour identification and alteration, Economic landscape - an expanse of scenery (landscape or surrounding), painting, drawing, or photograph of scenery, Survey of the practice and philosophy of landscape, Landscape surveys: principles and practices of identifying, analyzing and recording landscape resources. Field trips required. Planting trees, shrubs and grasses for aesthetic effect (often both active and passive), Study of the physiology and metabolism of floricultural crop plants during their development from seeds and vegetative materials through flowering.

D/CPS 415: Crop Pathology
Review of the major characteristics of the major pathogen groups in Delta State; introductory plant pathology, Development of disease in individual plants and plant population, plant disease triangle, disease cycle and relationship between disease cycle and epidemics, role of environmental factors (including temperature, moisture, and others) in contributing to the development of epidemics. Biology and control of plant diseases caused by fungi, viruses, bacteria, and nematodes, epidemiology and control of plant diseases; basic approaches (resistance, exclusion, chemical control, environmental manipulation, and using disease forecasting) for controlling plant diseases, understanding of the biology and control of plant diseases into developing economically and environmentally sustainable agricultural practices, anticipated future trends and the role of plant pathology and agriculture in global society