

College of Agriculture

The College of Agriculture emphasizes academic preparation with extensive community practice for leadership in rural Philippines. Courses are geared to understanding our society and to developing skills needed for making agricultural communities productive and financially viable. Silliman University College of Agriculture is an ACAP (Association of Colleges of Agriculture in the Philippines) charter member.

The College offers degree programs in Bachelor of Science in Agriculture (majors in Animal Science and Agronomy), Bachelor of Science in Agricultural Business and Master in Applied Science (M.App.Sci.) in Systems Agriculture. The Bachelor of Science programs are PAASCU accredited (level II).

Through a 10-year development program under the sponsorship of the International Development Program that ended in June 1994, a new thrust in learning and teaching agriculture was developed. The initial step was sending all the members of the faculty for either Special Study Program, Masteral or Ph.D. studies in Australia. The Alternative Approach, a new curricular approach that emphasizes experiential learning and systems thinking and practice is now being implemented at Silliman University College of Agriculture

The College of Agriculture utilizes an alternative approach to teaching and learning agriculture which emphasizes competency and issue-based learning.

The competencies expected of a

problem solver, and systems manager.

It is envisioned that graduates with such competencies can cope with real world prob Federal Republic of Germany with a grant of

\$90,000. The College has modern lecture rooms and indoor laboratories for animal and plant sciences built in 1977 Another building unit composed of lecture rooms, a laboratory, a library and offices was built in 1980 through the joint support of the Evangelical Central Agency and the Coconut Federation of the Philippines (COCOFED). In addition, it has eight cottages for seniors and juniors constructed at a cost of P1.2 million donated by the COCOFED.

Admission Requirements

Entering freshmen with an NSAT general score of 50 percentile or higher may be admitted into the college. Shiftees with an average grade of “1.7” may be admitted, provided that no failing grade will be obtained after admission.

A grade of at least “2.0” is required in all agricultural subjects; a quality point average of 2.0 is required

BACHELOR OF SCIENCE IN AGRICULTURAL BUSINESS (BSAB)

PROGRAM OBJECTIVE

Aware of the demand for Agribusiness graduates; the nature of employment open for graduates; and the capabilities of the faculty, the Agribusiness program of SUCA envisions to train manpower capable of fitting into any of the economic sectors within.

The program is focused of both agricultural entrepreneurship and agribusiness management. At the same time, the program offers two options for specialization in the form of elective subjects, which will be offered during the last two semesters of the program. Furthermore, curricular activities that will provide students access to real-world agribusiness will be a built-in component of

First Year

First Semester	Units	Second Semester	Units
Bio 11 (Gen. Biology I)	3	Bio 12 (Gen. Biology II)	3
Chem 11 (Gen. Chemistry I)	3	Chem 12 (Gen. Chemistry II)	4
BC 11 (Eng Plus)	3	BC 12 (Communication Skills I)	3
Math 11(College Algebra)	3	Math 12 (Plane Trigonometry)	3
Rel 11 (Old Testament and Message)	3	Rel 22 (New Testament and Message)	3
Mgt.11 (Fund. of Management)	3	CS 12 (Fund of Crop Science)	2
AS 11 (Intro to Animal Sci.)	3	Agrib 1b (F.L.E. - 3 contact hours)	1*
Agrib 1 (F.L.E. - 3 contact hours)	1*	PE 12 (Basic Physical Ed.)	(2)
PE 11 (Basic Physical Ed)	(2)	NSTP II	3
NSTP 1	3		
Total	25	Total	22

Second Year

First Semester	Units	Second Semester	Units
Fil 13 (Basic Comm Skills)	3	Fil 24 (Surv & Rdngs in Fil Lit)	3
Econ 21 (General Econ w/ TLR)	3	Econ 22 (Micro economics)	3
Phys 33 (General Physics I)	3	Phys 34 (General Physics II)	3
CF I (Computer Fundamentals I)	3	CF II (Computer Fundamentals II)	3
SS 21 (Principles of Soil Sci)	2	BC 25 (Research Writing)	3
AS 21(Intro to Livestock/Poultry Prod)	2	MGT 22 (Prin of Marketing)	3
CS 21 (Fund of Crop Prod)	2	Agrib 22 (Intro to Agrib Mgt)	2
Agrib IIa (F.L.E. - 9 contact hours)	3*	Agrib IIb (F.L.E. - 3 contact hours)	1*
PE 21 (Basic Physical Education)	2	PE 22 (Basic Physical Education)	(2)
Total	21	Total	21

Summer

Socio 11 (Introduction to Sociology)	3
Speech 11 (Fundamentals of Speech)	3
Philo 61 (Christian Ethics)	3

Total 9

Third Year

First Semester	Units	Second Semester	Units
Hist 31 (Phil Hist & Govt w/NC)	3	Hist 41 (Rizal's Life & Works)	3
Acctg 12 (Fund of Acctg I)	6	Mgt 56 (Marketing Mgt)	3
Fin 51 (Money, Cr & Banking)	3	Fin 52 (Financial Mgt)	3
Bus Math 21 (Business Stat)	3	Bus Math 22 (Quantitative Tech)	3
Ag Elective	2	Agrib 33/Mgt 51 (Agrib Prod Mgt)	2
Ag Sys 37 (Agricultural Systems)	2	Ag Sys 38 (Prin of Ecology)	2
Agrib IIIa (F.L.E. - 6 contact hours)	2*	Litt 22 (Literatures of the World)	3
		Agrib IIIb (F.L.E. - 6 contact hours)	2*
Total	21	Total	21

Fourth Year

First Semester	Units	Second Semester	Units
Bus Law 51 (Oblig & Contracts)	3	Mgt. 72 (Business Policy)	3
Mgt 53 (Personnel Management)	3	FA 51 (Art & Music Appre)	3
Socio 63 (Current Issues)	3	Ag Ext 80 (Ext Teach & Comm)	2
Ag Econ 42 (Fund of Ag Mgt)	2	Ag Elective I	2
Ag Entrep 44 (Agr. Entrepreneurship)	2	Ag Elective II	2
Ag Eng'g 41 (Water Mgt. System)	2	Agrib 100 (Thesis/Practicum)	3
Agrib 99 (Thesis/Practicum)	3	Agrib IVb (F.L.E. - 9 contact hours)	3*
Agrib IVa (F.L.E. - 9 contact hours)	3*		
Total	21	Total	18

*F.L.E. - Field Learning Experience

BACHELOR OF SCIENCE IN AGRICULTURE Major in Agronomy

PROGRAM OBJECTIVE

The Agronomy program of SUCA is organized and implemented in a manner which enables learners to acquire and develop competencies in crop production management, crop research and extension, and entrepreneurial skills through learning activities and experiences that are grounded on real-world

First Year

First Semester	Units	Second Semester	Units
Bio 11 (Gen. Biology I)	3	Bio 12 (Gen. Biology II)	3
Chem 11 (Gen. Chemistry I)	4	Chem 12 (Gen. Chemistry II)	4
BC 11 (Eng Plus)	3	BC 12 (Communication Skills I)	3
Math 11 (College Algebra)	3	Math 12 (Plane Trigonometry)	3
Rel 11 (Old Testament and Message)	3	Rel 22 (New Testament and Message)	3
AS 11 (Intro to Animal Sci.)	2	CS 12 (Fund of Crop Science)	2
AS Ia (F.L.E. - 3 contact hours)	1*	AS Ib (F.L.E. - 3 contact hours)	1*
PE 11 (Basic Physical Ed)	(2)	PE 12 (Basic Physical Ed.)	(2)
NSTP I	3	NSTP II	3
Total	22	Total	22

Second Year

First Semester	Units	Second Semester	Units
Fil 13 (Basic Comm Skills)	3	Fil 24 (Surv & Rdngs in Fil Lit)	3
Econ 21 (General Econ w/ TLR)	3	Phys 34 (General Physics II)	3
Phys 33 (General Physics I)	3	CF II (Computer Fundamentals II)	3
CF I (Computer Fundamentals I)	3	BC 25 (Research Writing)	3
SS 21 (Principles of Soil Sci)	2	Agron 22 (Intro to Genetics)	2
AS 21 (Intro to Livestock/Poultry Prod)	2	Agron 24 (Soil Fertility)	2
CS 21 (Fund of Crop Prod)	2	Agron 26 (Elem Plant Physiology)	2
Agron IIa (F.L.E. - 9 contact hours)	3*	Agron IIb (F.L.E. - 3 contact hours)	1*
PE 21 (Basic Physical Education)	(2)	PE 22 (Basic Physical Education)	(2)
Total	21	Total	21

Summer

Socio 11 (Introduction to Sociology)	3
Speech 11 (Fundamentals of Speech)	3
Philo 61 (Christian Ethics)	3

Total	9
--------------	----------

Third Year

First Semester	Units	Second Semester	Units
Math 16 (Applied Gen Stat)	3	FA 51 (Underst the Mus and Arts)	3
Lit 22 (Literatures of the World)	3	Hist 41 (Rizal's Life and Works)	3
Hist 31 (Phil Const & Govt)	3	CP 32 (Entomology)	2
CP 31 (Pathology)	2	Agron 34 (Perennial Crops)	2
Agron 33 (Prin of Plant Breeding)	2	Agron 36 (Major Tropical Fruits)	2
Agron 35 (Plant Growth)	2	Ag Sys 38 (Principles of Ecology)	2
Ag Sys 37 (Agricultural Systems)	2	Agron IIIb (F.L.E. - 12 contact hrs)	4*
Agron IIIa (F.L.E. - 12 contact hrs)	4*		
Total	21	Total	18

Fourth Year

First Semester	Units	Second Semester	Units
Socio 63 (Current Issues)	3	Ag Ext 80 (Ext Teach & Comm)	2
Ag Eng'g 41 (Water Mgt. System)	2	Ag Eng'g 42 (Farm Mechanics)	2
Agron 43 (Annual Crops)	2	Agron 44 (Pasture & Fodder Mgt.)	2
Agron 45 (Crop Physio)	2	Agron 46 (Veg. Production)	2
Ag Sem 97 (Seminar I)	1	Agron 48 (Post Harvest Tech)	2
Agron 99 (Thesis/Practicum)	3	Ag Sem 98 (Seminar II)	1
Ag Econ 42 (Fund of Ag Mgt)	2	Agron 100 (Thesis/Practicum)	3
Ag Entrep 44 (Agr. Entrepreneurship)	2	Agron IVb (F.L.E. - 15 contact hrs)	5*
Agron IVa (F.L.E. - 15 contact hours)	5*		
Total	22	Total	19

*F.L.E. - Field Learning Experience

BACHELOR OF SCIENCE IN AGRICULTURE

Major in Animal Science

PROGRAM OBJECTIVE

The B.S.A. major in Animal Science program is designed and implemented to develop animal science graduates who possess the competencies of an animal scientist and an animal production manager, and who can apply these competencies in real-world setting with entrepreneurial perspectives and within a sense of social and Christian commitment.

First Year

First Semester	Units	Second Semester	Units
Bio 11 (Gen. Biology I)	3	Bio 12 (Gen. Biology II)	3
Chem 11 (Gen. Chemistry I)	4	Chem 12 (Gen. Chemistry II)	4
BC 11 (Eng Plus)	3	BC 12 (Communication Skills I)	3
Math 11 (College Algebra)	3	Math 12 (Plane Trigonometry)	3
Rel 11 (Old Testament and Message)	3	Rel 22 (New Testament and Message)	3
AS 11 (Intro to Animal Sci.)	2	CS 12 (Fund of Crop Science)	2
AS Ia (F.L.E. - 3 contact hours)	1*	AS Ib (F.L.E. - 3 contact hours)	1*
PE 11 (Basic Physical Ed)	(2)	PE 12 (Basic Physical Ed.)	(2)
NSTP I	3	NSTP II	3
Total	22	Total	22

Second Year

First Semester	Units	Second Semester	Units
Fil 13 (Basic Comm Skills)	3	Fil 24 (Surv & Rdngs in Fil Lit)	3
Econ 21 (General Econ w/ TLR)	3	Phys 34 (General Physics II)	3
Phys 33 (General Physics I)	3	CF II (Computer Fundamentals II)	3
CF I (Computer Fundamentals I)	3	BC 25 (Research Writing)	3
SS 21 (Principles of Soil Sci)	2	AS 22 (Intro to Genetics)	2
AS 21 (Intro to Livestock/Poultry Prod)	2	AS 24 (Livestock/Poultry Feeding)	2
CS 21 (Fund of Crop Prod)	2	AS 26 (Anat & Physio of Farm Animals)	2
AS IIa (F.L.E. - 9 contact hours)	3*	AS IIb (F.L.E. - 3 contact hours)	1*
PE 21 (Basic Physical Education)	(2)	PE 22 (Basic Physical Education)	(2)
ROTC 21(1.5)		ROTC 22(1.5)	
Total	21	Total	21

Summer

Socio 11 (Introduction to Sociology)	3
Speech 11 (Fundamentals of Speech)	3
Philo 61 (Christian Ethics)	3

Total 9

Third Year

First Semester	Units	Second Semester	Units
Math 16 (Applied Gen Stat)	3	FA 51 (Underst the Mus and Arts)	3
Lit 22 (Literatures of the World)	3	Hist 41 (Rizal's Life and Works)	3
Hist 31 (Phil Const & Govt)	3	CP 32 (Entomology)	2
AS 31 (Microbiology)	2	AS 34 (Pork Production)	2
AS 33 (Prin of Animal Breeding)	2	AS 36 (Poultry Production)	2
AS 35 (Animal Climatology)	2	Ag Sys 38 (Principles of Ecology)	2
Ag Sys 37 (Agricultural Systems)	2	AS IIIb (F.L.E. - 12 contact hrs)	4*
AS IIIa (F.L.E. - 12 contact hrs)	4*		
Total	21	Total	18

Fourth Year

First Semester	Units	Second Semester	Units
Socio 63 (Current Issues)	3	Ag Ext 80 (Ext Teach & Comm)	2
Ag Eng'g 41 (Water Mgt. System)	2	Ag Eng'g 42 (Farm Mechanics)	2
AS 43 (Sanitation and Control)	2	AS 44 (Pasture & Fodder)	2
AS 45 (Beef Production)	2	AS 46 (Dairy Production)	2
Ag Sem 97 (Seminar I)	1	AS 48 (Meat Eval. & Process)	2
AS 99 (Thesis/Practicum)	3	Ag Sem 98 (Seminar II)	1
Ag Econ 42 (Fund of Ag Mgt)	2	AS 100 (Thesis/Practicum)	3
Ag Entrep 44 (Agr. Entrepreneurship)	2	AS IVb (F.L.E. - 15 contact hrs)	5*
AS IVa (F.L.E. - 15 contact hours)	5*		
Total	22	Total	19

*F.L.E. - Field Learning Experience

Course Description

FUNDAMENTAL AGRICULTURE COURSES

Crop Science 12 FUNDAMENTALS OF CROP SCIENCE 3 units

Discussion of basic concepts related to the composition and functions of plants, systems of crop classification, the process of plant growth and development, concepts of crop improvement, the various environmental factors that influence the process of plant growth and development, and the underlying theories of cultural practices used in crop production management.

Crop Science 21 FUNDAMENTALS OF CROP PRODUCTION 3 units

This course deals with discussions on the fundamental principles and concepts involved in the culture and management of various fields and horticultural crops. (2 hours lecture, 3 hours laboratory) Prerequisite: CS 12.

Soil Science 21 PRINCIPLES OF SOIL SCIENCE 3 units

This course involves study of the physical, chemical and biological properties of soils; soil formation and development;; soil moisture; soil fertility and land use; and elementary principles of soils conservation and management. Prerequisite:

- Crop Protection 31 PLANT PATHOLOGY** **3 units**
- This course deals with the study of the different causal organisms of plant diseases and the factors affecting disease development. The principles of plant disease control and management will also be discussed. (2 hours lecture, 3 hours laboratory) Prerequisites: Bio 11 and Bio 12.
- Crop Protection 32 ENTOMOLOGY** **3 units**
- This course deals with the nature and behavior of economic insects, their control, and integrated pest management (IPM). (2 hours lecture, 3 hours laboratory) Prerequisites: Bio 11 and Bio 12.
- Animal Science 11 INTRODUCTION TO ANIMAL SCIENCE** **3 units**
- Principles of breeding, physiology and nutrition in relation to production, processing and marketing of animal products. (2 hours lecture, 3 hours laboratory) Prerequisites: To be taken simultaneous with Bio 11 and Chem 11.
- Animal Science 21 INTRODUCTION TO LIVESTOCK AND POULTRY PRODUCTION** **3 units**
- The management of farm animals for the efficient production of meat, milk, eggs, and other animal products.
- Animal Science 31 GENERAL MICROBIOLOGY** **3 units**
- Biology of microorganisms with emphasis on bacteria and Introduction to applied microbiology.
- Agricultural Systems 37 AGRICULTURAL SYSTEMS** **3 units**
- This course deals with discussions on the nature and types of agricultural systems, and the interactions and interrelationship of the elements of these systems. Discussions will also emphasize the features and properties of sustainable agricultural systems. The concept of agroecosystem will also be discussed. (2 hours lecture, 3 hours laboratory).
- Agricultural Systems 38 PRINCIPLES OF ECOLOGY** **3 units**
- Deals with the principles of plant environment interaction in relation to distribution, structure, and functioning of plant communities. (2 hours lecture, 3 hours laboratory).
- Agricultural Extension 80 EXTENSION TEACHING AND COMMUNICATION** **3 units**
- Principles of extension teaching and communication, analysis, selection, and use of extension teaching methods as applied to human resource development in agriculture; evaluation of results. (2 hours lecture, 3 hours laboratory).
- Agricultural Economics 42 FUNDAMENTALS OF AGRICULTURAL MANAGEMENT** **3 units**

General economic principles, principles underlying farm management, including farm labor, marketing agricultural products and analyses of farm costs and returns, and their application on agricultural business, offices and programs. (2 hours lecture, 3 hours laboratory).

Agricultural Engineering 41 WATER MANAGEMENT SYSTEM 3 units

Weather elements, soil and water management in agricultural production systems, water and supplies, elementary surveying, institutional and legal aspects of water resource utilization and disposal. (2 hours lecture, 3 hours laboratory).

Agricultural Engineering 42 FARM MECHANICS 3 units

Structures and machinery for crop/animal production processing; principles of the function, design, selection, operation, adjustment, maintenance, and repair of farm machinery including power equipment, implements and appliances, economics of farm machinery and power utilization; woodworking, metal working, painting, concrete and masonry, plumbing, water supply, sewage disposal, electrical wiring, principles and operation of hand and power tools. (2 hours lecture, 3 hours laboratory). For Agron/AnSci Only

Agricultural Entrepreneurship 44 AGRICULTURAL ENTREPRENEURSHIP 3 units

Equips the student with knowledge and skills as an entrepreneur in starting and managing his/her own agricultural enterprise.

**AGRICULTURAL BUSINESS
Management**

11 FUNDAMENTALS OF MANAGEMENT 3 units

An introductory course dealing with the fundamentals of management, it covers the nature and activities in marketing, finance, production, research and development, and personnel. It analyzes the basic functions of management: planning, organizing, staffing, directing and controlling, and the various principles and concepts involved therein. Students are introduced to the use of case analysis as an exercise in the application of these principles.

22 PRINCIPLES OF MARKETING 3 units

A study of functions, institutions, principles and processes involved in the flow of goods and services from the producer to the consumer. It covers the four P's of marketing -- Product, Price, Promotion, and Place -- factors that influence the consumer an industrial markets as well as government regulations prevailing in the Philippine setting. Prerequisite: Mgt 11.

51/AGRIB 33 PRODUCTION MANAGEMENT 3 units

The techniques, managerial problems and the decision-making processes involved in the management of the production of goods and services. Topics include the content and design of the production specifications, methods and

standards, costing, production planning and control, and inventory management, scheduling procurement, quality control, cost control. The subject will introduce tools used in decision-making in productions such as: PERT-CPM, Break-even analysis, time and motion studies, etc. Prerequisite: Mgt 11.

53 PERSONNEL MANAGEMENT

3 units

Personnel management in the modern business organization. Personnel policies and practices conducive to good relations with employees and effective personnel utilization. Includes personnel operative functions as procurement, development, compensation, integration and maintenance of employees.

56 MARKETING MANAGEMENT

3 units

Applies the fundamental principles of management -- planning, organizing, staffing, directing, and controlling -- within the marketing subsystems of the firm at the interface with the firm's other functional subsystems. The emphasis is on management strategy rather than on marketing operations per se.

72 BUSINESS POLICY

3 units

This course is an exposition of the basic nature and character of top-management decision-making. It involves the analysis and formulation of corporate strategies and policies through integrated case studies. It requires the application of basic concepts and techniques covered in the various functional

Accounting

12 FUNDAMENTALS OF ACCOUNTING

6 units

This is the first course in accounting and is designated to meet the basic needs for accounting education of all business students, regardless of their field of major study. Emphasis is placed on understanding the reasons underlying basic accounting and bookkeeping methodology, and providing students with adequate grounding in the recording, classifying and summarizing phases of accounting to be able them to appreciate the varied uses of accounting data and to give them reasonable facility in dealing with, utilizing and interpreting accounting information. The transactions and accounting problems of a single proprietorship provide the setting for discussion in this course. Topics include the nature and objectives of accounting, fundamental accounting relationships, ledger and trial balance, journals including special and multi-column journals, posting to accounts, the accounting cycle, sales and cash receipts, purchases and cash payments, periodic summary, notes and interest, deferrals and accruals, receivables, merchandise inventory, plant assets and depreciation. A practice set

Business Mathematics

21 BUSINESS STATISTICS

3 units

This second course in the Business Mathematics series continues the progressive build-up of the student's mathematical skills with special emphasis on business statistics. Topics include statistical presentations, describing business data through measures of locations and variability, probability, sampling distributions, analysis of variance, chi-squares, analysis, time series analysis, etc.

22 QUANTITATIVE TECHNIQUES

3 units

This third course in the Business Mathematics series is intended for students to understand the application of quantitative methods to decision-making in business. Topics include: determinants and matrix algebra, the simplex method with application in transportation problem, and maximal flow problem, games and strategies, Markov analysis, pricing theory, linear programming, etc. Prerequisite:

Business Law

51 OBLIGATIONS AND CONTRACTS

3 units

Introduction to business law, obligations and contracts. A general course for background on the laws governing obligations and contracts, agency, sales, and other business transactions, with emphasis on fundamental principles on origin of civil and commercial contracts, obligations and its modifications, modes of extinguishing obligations and contracts. Prerequisite: Junior Standing.

Economics

21 INTRODUCTION TO ECONOMICS WITH TAXATION AND LAND REFORM

3 units

An introductory course to the study of economics. It aims to acquaint the beginning student with an understanding of the various economic principles. As such it will enable him to appreciate more fully the important functions of the individual in an economic society where he lives. This course discusses the meaning and significance of economics: the nature of economic problems, the quantitative approaches in solving economic problems, and the economic setting in Philippine conditions. Topics in taxation and land reform will also be discussed.

22 MICROECONOMICS

3 units

The course starts with the principles of economics and then introduces the basic concepts of microeconomic analysis: supply and demand, price determination, business costs, profit maximization, imperfect competition, monopoly, income distribution, and international trade. The topics of taxation and land reform are discussed in their microeconomic aspects. Prerequisites: Math 11,

Finance

51 MONEY CREDIT AND BANKING

3 units

Nature and functions of money, monetary standards, credit and credit instruments, banks and their functions, principles of commercial banking (deposits, reserves, loans, liquidity, policy).

52 FINANCIAL MANAGEMENT

3 units

Examines the financial theory and the objective of the firm; policies and practices required to plan and control the sources and uses of a firm's funds either emphasis on formulation, implementation and modification of corporate financial policies; management of current assets; capital budgeting; funds acquisition; dividend and determination of the optimal debt-equity mix.

Agribusiness

22 INTRODUCTION TO AGRICULTURAL MANAGEMENT

3 units

An introductory course that deals with the scope and breadth of the Agribusiness system. Topics include basic concepts on the role of management in agribusiness, economic principles as a framework for problem-solving and decision making processes and elements of marketing. It also includes types of business organization with particular emphasis on agricultural cooperatives.

99 & 100 FARM MANAGEMENT INTERNSHIP (FMI) 3 units

Management Elective; Economics Elective -- refer to College of Business Administration catalog)

**AGRONOMY
(Major Courses)**

22 INTRODUCTION TO GENETICS 3 units

Mechanisms of hereditary and variation, cytogenetics, mutation, nature of genes, population genetics & evolution genetics; bio-metrical procedures. (2 hours lecture, 3 hours laboratory) Prerequisites: Bio 11 and Bio 12.

24 SOIL FERTILITY 3 units

Soil nutrient elements and their availability, evaluation of soil fertility status, use of fertilizers and soil amendments. (2 hours lecture, 3 hours laboratory) Prerequisite: Soil Science 21.

26 ELEMENTARY PLANT PHYSIOLOGY 3 units

Photosynthesis, respiration, nutrition, water relations, and growth of plants. (2 hours lecture, 3 hours laboratory) Prerequisites: Chem 12, Bio 12.

33 PRINCIPLES OF PLANT BREEDING 3 units

Development, evaluation and maintenance of improved crops plants. (2 hours lecture, 3 hours laboratory).

34 PERENNIAL CROPS 3 units

Development, evaluation and maintenance of improved crops plants. (2 hours lecture, 3 hours laboratory).

35 PLANT GROWTH 3 units

Nature and processes of growth in plants, including the role played in the process by photohormones. (2 hours lecture, 3 hours laboratory).

36 MAJOR TROPICAL FRUITS 3 units

Botany, production and management of major tropical fruits, post harvest handling. (2 hours lecture, 3 hours laboratory).

43 ANNUAL CROPS 3 units

Important aspects of and recent advances in the culture and production of annual crops with emphasis on rice and corn to include multiple cropping. (2 hours lecture, 3 hours laboratory). Prerequisite: Crop Sci 12 Prerequisites: Agron 24, Math 16.

44 PASTURE AND FODDER CROPS 3 units

Basic principles & practices in the production and utilization of pasture and fodder crops including natural grasslands. (2 hours lecture, 3 hours laboratory).

45 CROP PHYSIOLOGY **3 units**

Photosynthesis, respiration, nutrition, water relations and growth of plants (2 hours lecture, 3 hours laboratory). Prerequisites: Chem 12, Bio 12).

46 VEGETABLE PRODUCTION **3 units**

Principles of vegetable production with emphasis on tropical and some temperate vegetables. Post harvest handling. (2 hours lecture, 3 hours laboratory).

48 POSTHARVEST TECHNOLOGY **3 units**

Basic principles and practices in handling, processing and storage of fruits, vegetables, ornamentals and plantation crops. (2 hours lecture, 3 hours laboratory).

97 & 98 SEMINAR IN AGRONOMY **2 units**

99 & 100 FARM MANAGEMENT INTERNSHIP (FMI) **6 units**

ANIMAL SCIENCE
(Major Courses)

22 Introduction to Genetics **3 units**

Mechanisms of hereditary and variation, cytogenetics, mutation, nature of genes, population genetics & evolution genetics, bio-metrical procedures. (2 hours lecture, 3 hours laboratory) Prerequisites: Bio 11, Bio 12.

24 Livestock and Poultry Feeding **3 units**

Composition and use of feeds for farm animals; formulation of rations, feeding practices. (2 hours lecture, 3 hours laboratory) Prerequisites: An. Sci. 21, Chem 12

26 Anatomy and Physiology of Farm Animals **3 units**

The comparative anatomy and applied physiology of the various species of livestock and poultry. (2 hours lecture, 3 hours laboratory) Prerequisite: An. Sci. 21.

33 Principles of Animal Breeding **3 units**

Genetics and statistical bases of animal improvement; topics in reproduction including artificial insemination. (2 hours lecture, 3 hours laboratory).

34 Pork Production **3 units**

Breeding, feeding, and management of swine; economics of production. (2 hours lecture, 3 hours laboratory).

35 Fundamentals of Animal Climatology	3 units
The mechanisms of thermo-regulation and animal adaptations; thermal stress, the problems associated with the improvement of livestock production in	
35 Fundamentals of Animal Climatology	3 units
The mechanisms of thermo-regulation and animal adaptations; thermal stress, the problems associated with the improvement of livestock production in	
36 Poultry Production	3 units
Breeding, feeding and management of beef cattle including carabaos and goats on the range and in confinement; economics of beef production. (2 hours lecture, 3 hours laboratory) Prerequisites: An. Sci. 21, 24, and 26.	
43 Livestock and Poultry Sanitation and Disease Control	3 units
Principles and practices in the prevention and control of common diseases in livestock and poultry (2 hours lecture, 3 hours laboratory) Prerequisite: An. Sci. 26.	
44 Pasture and Fodder Crops	3 units
Principles and practices in the prevention and control of common diseases in livestock and poultry (2 hours lecture, 3 hours laboratory) Prerequisite: An. Sci. 26.	
45 Beef Production	3 units
Principles and practices in the prevention and control of common diseases in livestock and poultry (2 hours lecture, 3 hours laboratory) Prerequisite: An. Sci. 26.	
45 Beef Production	3 units
Principles and practices in the prevention and control of common diseases in livestock and poultry (2 hours lecture, 3 hours laboratory) Prerequisite: An. Sci. 26.	
48 Slaughter, Carcass Evaluation, and Meat Processing	3 units
Antemortem and post-mortem inspection of slaughter animals, slaughtering, carcass evaluation, and meat hygiene. Meat selection, identification of standard cuts, meat curing and other meat preservation methods. (2 hours	
97 & 98 Seminar in Animal Science (1hour per week)	3 units
99 & 100 Farm Management Internship (FMI)	6 units

Members of the Faculty

Edna E. Dumancas - Associate Professor. BSA, University of the Philippines at Los Baños; MS, University of the Philippines at Los Baños

Jose Edwin C. Cubelo - Assistant Professor. BSA, Silliman University; MA, University of Minnesota, USA; Ph.D. University of the Philippines at Los Baños

Chona F. Javier - Assistant Professor. BSA, Silliman University; MS(Agronomy), University of the Philippines at Los Baños

Michaelito A. Naldo. BSA, University of the Philippines at Los Baños; MS University of the Philippines at Los Baños

Freddie A. Salayog - Assistant Professor; BSA; MS, University of the Philippines at Los Baños, MS, University of New England, Australia

Santiago B. Utzurum, Jr. - Assistant Professor; BSA, Silliman University; M. Agriculture, University of the Philippines at Los Baños; P.h.D. (candidate), University of Queensland, Australia

Nelson C. Vilar - Assistant Professor. BSA, Silliman University; M. Applied Science, University of Western Sydney, Australia

College Support Staff

Melba F. Divinagracia
College Secretary; BBA, Silliman University

Lolita N. Paeste
College Librarian; BSE Library Science, Silliman University

Christopher L. Abella
Guidance Counselor; BS Psychology, Silliman University

Luis Jose G. Pascual
Farm Manager; BSA, Silliman University
M. Applied Science, University of Western Sydney, Australia

Rowel A. Monte de Ramos
Agribusiness Manager; BSA, Silliman University

Danilo B. Baldoza
Farm Assistant

Crispin V. Ramirez
Janitor