

2.0. Structure of the Degree Programme

Faculty of Agriculture offers Bachelor of Science Honours in Agriculture degree, as a four-year programme comprising eight semesters. This programme is designed as an outcome based credit valued system in compliance with the level 6 of the SLQF and SBS of Agriculture. Each semester has 15 weeks of academic work. This degree programme aims to equip the students with a comprehensive subject specific knowledge, skills and attitudes on the fundamental concepts, principles and practices associated with the crop and animal farming, production of agro-based commodities, processing and marketing of those products, and associated social, environmental and managerial issues. In order to accomplish the said aims, course units of the curriculum are identified into the following subject areas namely technical subjects, complementary subjects and auxiliary subjects.

2.1. Technical Subject Areas

Technical subjects are meant to equip the students with a comprehensive subject specific knowledge, skills and attitudes on the entire range of fundamental concepts, principles and practices associated with the preparation of land, establishment and management of crops and rearing of animals, production of useful crop- and animal-products, processing and marketing of those commodities, and associated social, environmental and managerial issues. The technical subject areas consist of compulsory, complementary and elective subject areas

2.1.1. Compulsory Subject Areas

- Agronomy (crop production, crop physiology and agroforestry)
- Animal Science (Production, Physiology, Nutrition and Breeding)
- Agricultural Biology (Plant protection, Plant Physiology and Breeding)
- Agricultural Chemistry (Soil Science and Food Science)
- Agricultural Engineering (Water Management and Farm Machinery)
- Agricultural Economics and Agribusiness Management
- Agricultural Extension
- Post-Harvest Technology

2.1.2. Complementary Subject Areas

- Bio-Statistics and Experimental Design
- Industrial Training
- Experiential Learning
- Research Project

- 2.1.3. Elective Subject Areas
 - Environmental Sciences
 - Agricultural systems
 - Microbiology
 - Biotechnology

2.2. Auxiliary Subject Areas

- English
- Mathematics,
- Information and Communication Technology
- Principles of Management
- Scientific Writing
- Social Harmony and Active Citizen
- Laboratory Techniques

The degree programme is delivered as core and specialization modules. The core module covers the entire range of compulsory subject areas indicated in section 2.1.1 to ensure imparting the desired vital aspects of knowledge, skills and attitudes stipulated in the Subject Benchmark Statement of Agriculture (SBSA). In addition, the degree programme comprises specialization modules to impart in-depth knowledge and skills in specified subject areas selected by students. The core module is jointly offered by the six departments of study and eight specialization modules are offered by the six departments of study. Specialization courses are offered from the 6th semester onwards. The entire course units are classified into five categories.

2.3. Types of Course Units

- 2.3.1. Core Course Units: These course units are designed to equip the students with a comprehensive subject specific knowledge, skills and attitudes on the entire range of fundamental concepts, principles and practices associated with the field of agriculture.
- 2.3.2. Specialization Course Units: These course units are designed to provide additional knowledge and skills in each specialization field. Specialization courses that are unique to each specialization are compulsory.
- 2.3.3. Complimentary course Units: These course units are intended to provide the required knowledge skills attitude and mindset to undertake independent research and to prepare to the working environment.

2.3.4. Auxiliary Course Units: These course units are designed to enhance the generic skills required to supplement the knowledge and skills of students.

2.3.5. Elective Course Units: These course units are designed to provide additional knowledge and skills in each specialization field, which are not compulsory, but a selected number could be chosen by students to follow based on their preference and the advice of the Department of Specialization. Each specialization offers a series of elective courses.

All core course units, complementary and auxiliary course units offered in this degree program are compulsory. Each specialization offers compulsory courses that are unique to each specialization and a series elective courses.

2.4. Medium of Instruction

The medium of instruction of the degree programme is English. To enhance the language proficiency in national languages, course units on Sinhala for Tamil students and Tamil for Sinhala students are offered.

2.5. Credit Unit

A credit unit is the numeric value assigned to a course unit, which indicates its relative weight within the degree programme. One credit is considered equivalent to 50 notional learning hours for a taught course, laboratory studies course or field studies. In case of industrial training, experiential learning and social harmony and active citizen, including time allocated for assessments and in case of research, including time allocated for literature survey, one credit is considered equivalent to 100 notional hours. In addition, one credit unit of teacher assisted learning should be either 15 hours of lectures or 30 hours of practical/tutorials/assignments.

2.6. Course Notation

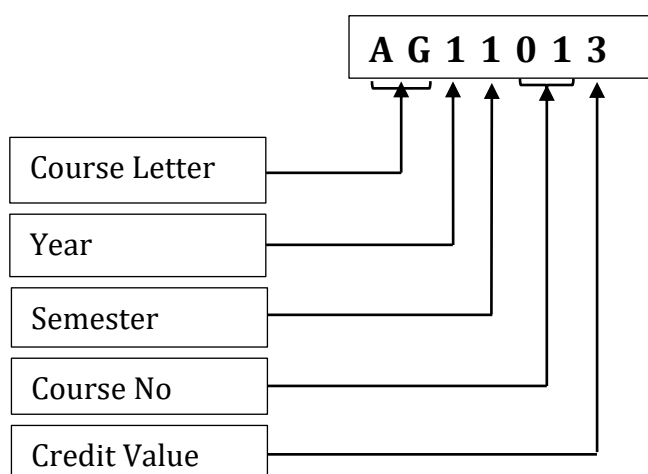
The two alphabets abbreviation of the course code denotes the department / discipline/ auxiliary/ common core courses. Inter-disciplinary course will be jointly denoted by alphabets representing the departments/discipline concerned.

Table 02: Course Letter of the Course units

Course Letter	Department / Discipline / Complementary/Auxiliary courses
AG	Agronomy
AS	Animal Science
AB	Agricultural Biology
SS	Soil Science discipline of Agricultural Chemistry
FS	Food Science discipline of Agricultural Chemistry
AE	Agricultural Engineering
EC	Economics discipline of Department of Agricultural Economics
EX	Extension discipline of Department of Agricultural Economics
AC	Auxiliary Course
CC	Complementary Course

The first digit of the five-digit number code denotes the year, second digit denotes the semester, third and fourth digits indicate the subject number and the last digit denotes the credits of the particular subject.

An example of course notation is given below.



2.7. Layout of the Degree Programme

The programme consists of 127 credit units including 91 core course credit units, 14 complementary course credit units and 22 specialization course credit units. Each specialization module must have a minimum of 14 compulsory credit units that are unique to

that specialization and a series of elective courses. Six credit units of research project (CC 42016) is also included in the complementary course credit units. In addition, 16 credit units of auxiliary courses are offered.

Table 03: The Credit distribution of the Degree Programme

Semester	Name of the Semester	Type of Course units	Credits
1	First Year First Semester	Core Courses	14
		Auxiliary courses	07
2	First Year Second Semester	Core Courses	14
		Auxiliary courses	02
3	Second Year First Semester	Core Courses	15
		Auxiliary courses	01
4	Second Year Second Semester	Core Courses	19
		Auxiliary courses	01
5	Third Year First Semester	Core Courses	19
		Complementary Courses	02
		Auxiliary Courses	02
6	Third Year Second Semester	Core Courses	12
		Specialization Courses	04
		Auxiliary Courses	03
7	Fourth Year First Semester	Core Courses	06
		Specialization Courses	10

		Elective Courses (Specialization)	08
8	Fourth Year Second Semester	Complementary Course (Research Project)	06
Total credit			127

2.8. Specialization

The Faculty provides opportunity to pursue eight specialization namely agronomy, animal science agricultural biology, soil science, food science, agricultural engineering, applied economics and agribusiness management, agricultural extension from third year second semester onwards. Each student must complete a minimum 22 credits of specialization courses. Each specialization comprises 14 credits of compulsory course units offered by the respective department and a set of elective course units. Elective course units could be chosen by students to follow based on their preference and the advice of the Department of study. Further, a student has the freedom to follow maximum of 6 credit units of specialization courses from other departments over and above the credit requirement of the degree programme from third year second semester onwards. In addition, a student should carry out 6 credit units of research project related to the specialization during the 8th semester.

2.9. Selection Criteria for Specialization

Every student will be given an opportunity for specialization. Faculty board of the Faculty of Agriculture decides the minimum and maximum number of students that could be assigned for each specialization based on the number of students and required facilities available in the department/s. Application for specialization will be called in third year first semester. Cumulative Grade Point Average (CGPA) up to 5th semester shall be used as a criterion to assign the students into different specialization areas based on their academic merit.

3.0. Evaluation System

Evaluation system has formative and summative assessments for both theory and practical components. Examinations consist of either theory or practical or combination of both which is based on the course structure. The grade of theory and practical component of a course comprises 30 percent from formative assessment and 70 percent from summative assessment. Marks for the theory and practical components in the final grade of a course will be calculated

proportionately to the credit value distributed to the theory and practical components. Final grade of a course that has only theory or practical component comprises 30% from formative assessment and 70% from summative assessment.

3.1. Assessment of Theory Component:

Table 04: Theory Components and Allocated Marks

Components of Examination	Marks
Formative Assessment	
<i>Announced Quiz</i> 10	30
<i>In Class Test</i> 15	
<i>Assignment/Presentation</i> 05	
Summative Assessment	70
Total	100

3.2. Assessment of Practical Component:

Practical assessment includes formative and summative assessment. Total marks of the practical component comprises 30 percent from formative assessment and 70 percent from summative assessment. Formative assessment shall comprise a combination of appropriate components to each course unit from the followings: laboratory practical reports, field practical reports, field assignments, field trip reports, case study reports, progress reports/presentation of problem based studies, progress reports /presentation of mini-projects and study visit reports. Summative assessment shall comprise a combination of appropriate components to each course unit from the followings: laboratory/field practical, spot examination, oral examination, project reports/presentations.

3.3. Eligibility to Sit Examinations

It is mandatory for a student to have 80% attendance in both theory and practical classes for sitting examinations of each course unit. A student who does not satisfy the attendance requirement will be allowed to sit the examination in the next available attempt as a repeat candidate. Under exceptional circumstances, with the recommendation of the faculty board and the approval of the senate, a student could be waived from the attendance requirement.

3.4. Repeating Examinations

3.4.1. Formative assessment

If a student is absent for formative assessment due to medical reason or any other valid reasons, he/she has to inform his/her absence to the Head of the Department or course coordinator in writing within three days. The relevant supportive documents such as medical certificate or appropriate evidences have to be submitted within a week.

3.4.2. Summative assessment

If a student is absent for summative assessment due to medical reason, he/ she has to inform his/ her absence to the office of the Dean, Faculty of Agriculture within three days and has to submit medical certificate within two weeks. On the request of the student, the next available attempt will be considered as first attempt upon the recommendation of Faculty Board and the approval of the Senate.

If a student is absent for summative assessment due to any exceptional reasons, on the request of the student, he/she will be given an opportunity to sit the next available summative assessment as first attempt upon the recommendation of Faculty Board and the approval of the Senate.

A student will only be allowed to repeat a course three times consecutively and the maximum grade for such course unit will be C+.

3.4.3. Mercy Chance to Sit Examinations

If a student fails the course unit at all three repeat attempts, he/she may request for a mercy chance. With the recommendation of faculty board and the approval of the Senate, a mercy chance would be given.

For the mercy chance candidates, the marks of summative assessment alone or combination of marks of formative and summative assessment whichever is higher will be taken to compute the final grade.

3.5. Upgrading a Course unit

A student will be allowed to upgrade the grade of a course unit to maximum of C+ by sitting either practical or theory component or both at the next available attempt.

4.0. Grade and Grade Point Values

The proposed grades, grade point values and marks allotted are given below,

Table 06. Grade, Grade Point Value and Marks

Grade	Grade Point Value (GPV)	Marks
A+	4.00	85 – 100
A	4.00	80 – 84
A-	3.70	75 – 79
B+	3.30	70 – 74
B	3.00	65 – 69
B-	2.70	60 – 64
C+	2.30	55 – 59
C	2.00	50 – 54
C-	1.70	45 – 49
D+	1.30	40 – 44
D	1.00	35 – 39
E	0.00	00 – 34

When a student is absent from or fail any component of the examination, the status of a course unit will be indicated as given in the table below.

Table 07: Description of the status of a course unit

Status of the course unit	Description
Ab	Absent for both Theory and Practical
I e.g. I (P) I (T)	Incomplete (Either Theory or Practical component absent) Practical component absent Theory component absent
Grade (T) e.g. C ⁺ (T)	Fail (Failed in Theory component)
Grade (P) e.g. C ⁺ (P)	Fail (Failed in Practical component)
Grade (T, P) e.g. C ⁻ (T, P)	Fail (Failed in both Theory and Practical)

5.0. Calculation of Grade Point Average (GPA)

An aggregate index will be calculated as a weighted average of the grade and the number of course credit units for each semester. This aggregate index will be referred to as Grade Point Average (GPA) and will be computed using equation 1.

$$GPA = \frac{\sum G_i C_i}{\sum C_i} \dots\dots\dots \text{Equation 1}$$

Where G_i and C_i represent the grade point value and the credit unit of the i^{th} course, respectively.

6.0. Calculation of the Cumulative Grade Point Average (CGPA)

The final GPA obtained by a student on completion of all required courses will be referred to as Cumulative Grade Point Average (CGPA) and will be computed using equation 2. Equal weightage will be given to all semesters for the calculation of the CGPA. The CGPA will be rounded to two digits.

$$CGPA = \frac{\sum_i^g (GPA_i \times \sum C_i)}{\sum C_i} \dots\dots\dots \text{Equation 2}$$

Where GPA_i represents the Grade Point Average (GPA) of a semester obtained by a student and $\sum C_i$ is the total credit values for the course offered during the respective semester.

7.0. Criteria for Award of Degree

To be eligible for the award of the degree of Bachelor of Science Honours in Agriculture, a student must fulfil the following requirements:

- 1) He/she must complete a minimum of 127 credits comprising 119 compulsory credits that include 91 credits from core course units, 14 credits from complementary course units and 14 credits from compulsory specialization course units and a minimum of 8 credits from elective course units relevant to the specialization.
- 2) He/she must complete 16 credits of auxiliary course units
- 3) He/she must obtain minimum of C grade in all course units contributing to the 127 credits mentioned in 7.1 and all auxiliary course units except AC 32022 English III for which he/she must obtain a minimum of D grade.
- 4) He/she must obtain Overall GPA (OGPA) of 2.00 or above

8.0. Eligibility and Cut-off levels of OGPA for Awarding Classes/Pass

To be eligible for the class, a student must complete the degree within four academic years from the date of commencement of the programme.

The cut-off level of Overall Grade Point Average (OGPA) values for awarding classes/passes

are,

Table 08. Overall Grade Point Average and Class

OGPA	Class/Pass
≥ 3.70	First Class
3.30 - 3.69	Second Upper
3.00 – 3.29	Second Lower
2.00 – 2.99	Pass

9.0.Details of Course units offered in the Degree Programme

The course units offered by the degree program are given in Tables below. The four auxiliary course units given in the Table 09 are offered in the pre-semester of the first year first semester to prepare the students to follow the technical subjects.

Table 09: Pre-Semester Course units

No.	Code	Title	Credits
1	AC 11012	Computer Literacy and Basic Application	2:15/30/55
2	AC 11022 (AE / EC)	Basic Mathematics	2:30/00/70
3	AC 11032	English I	2:30/00/70
4	AC 11041 (FS / AB)	Laboratory Techniques	1:00/30/20

Table 10: First Year First Semester Course units

No.	Code	Title	Credits
1.	AG 11013	Principles of Crop Production	3:30/30/90
2.	AS 11012	Principles of Animal Production	2:23/15/62
3.	AB 11012	Cell Biology and Crop Botany	2:15/30/55
4.	SS 11012	Nature of Soils	2:15/30/55
5.	AE 11012	Applied Hydrology and Engineering Drawing	2:15/30/55
6.	EC 11013	Principles of Micro and Macroeconomics	3:45/00/105
	Total		14

Table 11: First Year Second Semester Courses

No.	Code	Title	Credits
1.	AG 12012	Cereal Crops Production	2:20/20/60
2.	AS 12012	Anatomy and Physiology of Farm Animals	2:23/15/62
3.	AB 12012	Plant Physiology and Environmental Biology	2:23/15/62
4.	SS 12013	Soil Properties and Processes	3:30/30/90
5.	AE 12013	Principles of Farm Machinery	3:30/30/90
6.	EX 12012	Agricultural Extension and Communication	2:15/30/55
7.	AC 12012	English II	2:30/00/70
Total			14

Table 12: Second Year First Semester Courses

No.	Code	Title	Credits
1.	AG 21012	Field Crops Production	2:15/30/55
2.	AG 21022	Plant Propagation and Nursery Management Techniques	2:20/20/60
3.	AS 21012	Applied Animal Nutrition and Forage Production and conservation	2:23/15/62
4.	AB 21012	Economic Entomology	2:15/30/55
5.	FS 21012	Biochemistry	2:20/20/60
6.	AE 21013	Water Resource Engineering	3:30/30/90
7.	EC 21012	Intermediate Microeconomics	2:30/00/70
8.	AC 21011	Social Harmony and Active citizen	1:00/30/70
Total			15

Table 13: Second Year Second Semester Courses

No.	Code	Title	Credits
1.	AG 22012	Horticulture I	2:20/20/60
2.	AG 22022	Principles of Forestry	2:23/15/62
3.	AS 22012	Livestock Breeding and Health Management of Farm Animals	2:15/30/55
4.	AS 22023	Ruminant Management	3:23/45/82
5.	AB 22012	Basic Microbiology and Phytopathology	2:15/30/55
6.	FS 22013	Principles of Food science and Nutrition	3:30/30/90

7.	AE 22012	Land Surveying and Irrigation	2:23/15/62
8.	EC 22013	Agribusiness Management and Business Accounting	3:30/30/90
9.	AC 22011	Career Guidance and Skill Development	1:00/30/20
Total			19

Table 14: Third Year First Semester Courses

No.	Code	Title	Credits
1.	AG 31012	Horticulture II	2:15/30/55
2.	AS 31013	Management of Non Ruminants and Aquaculture Technology	3:30/30/90
3.	AB 31013	Plant Protection	3:30/30/90
4.	AB 31022	Agricultural Biotechnology	2:23/15/62
5.	SS 31013	Soil Classification, Soil Fertility and Plant Nutrition	3:30/30/90
6.	AE 31012	Postharvest Engineering	2:23/15/62
7.	EC 31012	Agriculture and Food Marketing	2:15/30/55
8.	CC 31012	Statistical Methods	2:23/15/62
9.	AC 31012	Principles of Management	2:30/00/70
Total			19

Table 15: Third Year Second Semester Courses

No.	Code	Title	Credits
1.	AG 32012	Plantation and Export Crops Production	2:23/15/62
2.	AS 32012	Animal Product Processing Technology	2:15/30/55
3.	AB 32012	Genetics and Plant Breeding	2:23/15/62
4.	FS 32012	Food Technology	2:20/20/60
5.	AE 32012	Environmental Engineering	2:23/15/62
6.	EC 32012	Introduction to Econometrics	2:23/15/62
7.	AC 32011	Scientific Writing	1: 00/30/20
8.	AC 32022	English III	2: 30/00/70
Total			12

Table 16: Third Year Second Semester Specialization Courses

No.	Code	Title	Credits
Department of Agronomy			
9	AG 32022	Resilient and Sustainable Cropping System	2:23/15/62
10.	AG 32032	Commercial Floriculture	2:23/15/62
Department of Animal Science			
9	AS 32022	Sustainable Animal Breeding	2: 23/15/62
10.	AS 32032	Marine and Inland Fish Production	2: 23/15/62
Department of Agricultural Biology			
9	AB 32022	Agricultural Acarology	2: 23/15/62
10.	AB 32032	Nematology	2:23/15/62
Department of Agricultural Chemistry			
<i>Soil Science</i>			
9	SS 32022	Soil Physics for Sustainable Agriculture	2: 20/20/60
10.	SS 32032	Soil Chemistry	2: 23/15/62
<i>Food Science</i>			
9	FS 32022	Food Chemistry	2:23/15/62
10.	FS 32032	Food Microbiology	2:23/15/62
Department of Agricultural Engineering			
9	AE 32022	Irrigation and Water Management	2:23/15/62
10.	AE 32032	Farm Machinery Testing and Evaluation	2:23/15/62
Department of Agricultural Economics			
Applied Economics and Agribusiness Management			
9	EC 32022	Agricultural Development and Policy Analysis	2:30/00/70
10.	EC 32032	Natural Resource and Environmental Economics	2:23/15/62
Agricultural Extension			
9.	EX 32022	Extension Education	2:15/30/55
10.	EX 32032	Development Communication	2:23/15/55
Total			4

Table 17: Fourth Year First Semester Courses under core programme

	Code	Title	Credits
1.	CC 41012	Experimental Design	2:30/00/70
2.	CC 41022	Computer Application in Biostatistics	2:00/60/40
3.	CC 41031	Experiential Learning	1:00/00/100
4.	CC 41041	Industrial Training	1:00/00/100
Total			6

Fourth Year First Semester – Specialization Courses

Table 18: Specialization Courses offered by Department of Agronomy

Compulsory Courses		Elective Courses	
Code	Course Title	Code	Course Title
AG 41012	Advance Crop Physiology (2:23/15/62)	AG 41062	Commercial Orchard Crop Production (2:23/15/62)
AG 41022	Sustainable Weed Management (2:23/15/62)	AG 41072	Protected Agriculture Techniques (2:23/15/62)
AG 41032	Landscape Architecture (2:23/15/62)	AG 41082	Invitro Propagation Techniques (2:23/15/62)
AG 41042	Sustainable Forest Management (2:23/15/62)	AG 41092	Crop Simulation Modelling (2:23/15/62)
AG 41052	Climate Change Mitigation and Adaptation in Agriculture (2:23/15/62)	AG 41102	Organic Crop Production Systems (2:23/15/62)

Table 19: Specialization Courses offered by Department of Animal Science

Compulsory Courses		Elective Courses	
Code	Course Title	Code	Course Title
AS 41012	Dairy Technology and Lactation physiology (2: 23/15/62)	AS 41062	Seafood processing and Post-harvest Technology (2: 23/15/62)
AS 41022	Meat Production and Technology (2: 23/15/62)	AS 41072	Animal By-product Technology (2: 30/00/70)
AS 41032	Reproductive Physiology (2: 23/15/62)	AS 41082	Wild life of Economic Importance (2: 23/15/62)
AS 41042	Advanced Animal Nutrition (2: 23/15/62)	AS 41092	Ornamental Fisheries (2: 23/15/62)
AS 41052	Animal Biotechnology (2: 23/15/62)	AS 41102	Integrated Animal Production Systems (2: 23/15/62)
		AS 41112	Micro livestock Production (2: 23/15/62)
		AS 41122	Inland and Marine Fisheries Management (2: 23/15/62)

		AS 41132	Avian Health and Hygiene (2: 23/15/62)
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Table 20: Specialization Courses offered by Department of Agricultural Biology

Compulsory Courses		Elective Courses	
Code	Course Title	Code	Course Title
AB 41012	Integrated Pest Management (2:23/15/62)	AB 41062	Soil Borne Pathogens (2:23/15/62)
AB 41022	Invertebrate Pathology (2:23/15/62)	AB 41072	Biological Control of Pests (2:23/15/62)
AB 41032	Genetic Engineering (2:23/15/62)	AB 41082	Vermitechnology and Biowaste Management (2:23/15/62)
AB 41042	Plant Biotechnology (2:23/15/62)	AB 41092	Microbial Inoculants in Agriculture (2:23/15/62)
AB 41052	Clinical plant Pathology (2:23/15/62)	AB 41102	Plant Tissue Culture (2:23/15/62)
		AB 41112	Vertebrate Pest Management (2:23/15/62)
		AB 41122	Apiculture (2:23/15/62)
		AB 41132	Mushroom Cultivation (2:23/15/62)
		AB 41142	Transgenics in Crop Improvement (2:30/00/70)
		AB 41152	Molecular Plant Pathology (2:23/15/62)

Table 21: Specialization Courses offered by Department of Agricultural Chemistry

Food Science Specialization

Compulsory Courses		Elective Courses	
Code	Course Title	Code	Course Title
FS 41013	Food preservation Technology (3:30/30/90)	FS 41052	Food product Development (2:15/30/55)
FS 41023	Food Analysis (3:30/30/90)	FS 41062	Processing of foods of plant origin (2:23/15/62)
FS 41032	Food and Nutrition (2:23/15/62)	FS 41072	Sensory evaluation of Foods (2:23/15/62)

FS 41042	Food Safety and sanitation (2:23/15/62)	FS 41082	Food packaging (2:23/15/62)
		FS 41092	Fermentation Technology (2:23/15/62)
		FS 41102	Food Lipids (2:23/15/62)
		FS 41112	Functional Foods and Nutraceuticals (2:23/15/62)

Soil Science Specialization

Compulsory Courses		Elective Courses	
Code	Course Title	Code	Course Title
SS 41013	Land resource management and GIS applications (3: 30/30/90)	SS 41062	Soil and Environmental Management (2:15/30/55)
SS 41022	Soil and Plant Analytical Techniques (2: 23/15/62)	SS 41072	Soil management based community project (2: 15/30/55)
SS 41033	Sustainable plant Nutrition (3:30/30/90)	SS 41082	Soil taxonomy and soils of Sri Lanka (2:23/15/62)
Either SS 41042 or SS 41052	Soil Biology and fertility (2:15/30/55) or Soil organic matter and biodiversity (2: 15/30/55)		

Table 22: Specialization Courses offered by Department of Agricultural Engineering

Compulsory Courses		Elective Courses	
Code	Course Title	Code	Course Title
AE 41012	Renewable energy and sustainable development (2:23/15/62)	AE 41072	Machinery and structural design (2:15/30/55)
AE 41022	Food processing engineering (2:23/15/62)	AE 41082	Engineering mechanics (2:23/15/62)
AE 41032	Hydrological modelling of rainfall and runoff (2:30/00/70)	AE 41092	Electrical power & machines (2:23/15/62)
AE 41042	Post-harvest technology and machinery management (2:23/15/62)	AE 41102	Cleaner production technology (2:23/15/62)
AE 41052	Industrial bio-process technology (2:23/15/62)	AE 41112	Thermal technologies for biomass processing (2:23/15/62)

AE 41062	Tillage and soil dynamics (2:23/15/62)	AE 41122	Application of chemometrics in environmental engineering (2:23/15/62)
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Table 23: Specialization Courses offered by Department of Agricultural Economics

Applied Economics and Agribusiness Management Specialization

Compulsory Courses		Elective Courses	
Code	Course Title	Code	Course Title
EC 41012	International Trade and Monetary Economics (2:30/00/70)	EC 41062	Introduction to Management Science and Linear Programming (2:15/30/55)
EC 41022	Rural Economics and Agricultural Household Models (2:15/30/55)	EC 41072	Marine Resource Economics and Bio Economic Modelling (2:15/30/55)
EC 41032	Econometrics (2:23/15/62)	EC 41082	Industrial Organization (2:30/00/70)
EC 41042	Project Analysis (2:30/00/70)	EC 41092	Introduction to Game Theory (2:30/00/70)
EC 41052	Entrepreneurship Development in Agriculture (2:15/30/55)	EC 41102	Marketing Management (2:30/00/70)
		EX 41052	Human Resource Management (2:30/00/70)
		EC 41112	Food Supply Chain Management (2: 30/00/70)
		EC 41122	Planning and Promotion of Agro-Enterprises (2:15/30/55)
		EC 41132	Financial Management (2:30/00/70)
		EC 41142	Intermediate Macroeconomics (2:30/00/70)

Agricultural Extension Specialization

Compulsory Courses		Elective Courses	
Code	Course Title	Code	Course Title
EX 41012	Community Development Approaches (2:23/15/62)	EC 41032	Econometrics (2:23/15/62)
EX 41022	Rural Sociology (2:23/15/62)	EC 41052	Entrepreneurship Development in Agriculture (2:15/30/55)
EX 41032	Project Development and Management (2:23/15/62)	EC 41092	Introduction to Game Theory (2:30/00/70)
EX 41042	Social Research Methods (2:23/15/62)	EC 41102	Marketing Management (2:30/00/70)

EX 41052	Human Resource Management (2:30/00/70)	EC 41112	Food Supply Chain Management (2: 30/00/70)
		EC 41122	Planning and Promotion of Agro-Enterprises (2:15/30/55)
		EC 41132	Financial Management (2:30/00/70)

Table 24: Fourth Year Second Semester Course

	Code	Title	Credits
1.	CC 42016	Research Project	6:00/00/600