

TAMIL NADU AGRICULTURAL UNIVERSITY



112th Academic Council

18th April, 2011

B. Sc. (Agriculture)

Syllabi 2011

CONTENTS

S. No	Title	Page. No
1.	Semesterwise distribution of courses	2-5
2.	Department wise distribution of courses	6-11
3.	Syllabi for I semester Courses	14-40
4.	Syllabi for II semester Courses	43-70
5.	Syllabi for III semester Courses	73-100
6.	Syllabi for IV semester Courses	103-136
7.	Syllabi for V semester Courses	139-172
8.	Syllabi for VI semester Courses	175-199
9.	Syllabi for VII semester Courses	202 -204
10.	Syllabi for VIII semester Courses	207-229

B.Sc. (Agriculture): 2011 Syllabi

Semester wise distribution of courses

I Year I Semester

Sl. No.	Course No.	Course Title	Credit Hours	Department
1.	AGR 101	Principles of Agronomy and Agricultural Heritage	1+1	Agronomy
2.	AGM 101	Agricultural Microbiology	2+1	Agri. Microbiology
3.	COM 111	Fundamentals of Information Technology	1+1	PS & IT
4.	MAT 111	Applied Mathematics	1+1	PS & IT
5.	SAC 101	Principles of Analytical Chemistry	1+1	SS & AC
6.	PBG 101	Introduction to Agricultural Botany	1+1	PB & G
7.	ENG 101	English for effective communication	0+1	English
8.	NSS/NCC 101	National Service Scheme/ National Cadet Corps	0+1	NSS/NCC
9.	PED 101	Physical Education	0+1	Physical Education
		Total	7+9=16	

I Year II Semester

Sl. No.	Course No.	Course Title	Credit Hours	Department
1.	AGR 102	Fundamentals of Agricultural Meteorology	1+1	Agronomy
2.	BIC 101	Fundamentals of Biochemistry	2+1	Biochemistry
3.	CRP 101	Crop Physiology	2+1	Crop Physiology
4.	PBG 102	Principles of Genetics	2+1	PB&G
5.	AEX 101	Dimensions of Agricultural Extension	1+1	Agri. Extension
6.	AEC 101	Principles of Agricultural Economics	1+1	Agri. Economics
7.	HOR 111	Fundamentals of Horticulture	1+1	Horticulture
8.	ENS 101	Principles of Environmental Sciences	1+1	Environmental Sciences
9.	FSN 111	Principles of food science and processing	1+1	Home Science
		Total	12+9=21	

II Year III Semester

Sl. No.	Course No.	Course Title	Credit Hours	Department
1.	AGR 201	Weed Management	1+1	Agronomy
2.	AGR 202	Irrigation Management	1+1	Agronomy
3.	AEN 201	Fundamentals of Entomology	2+1	Agri. Entomology
4.	PAT 201	Fundamentals of Plant Pathology	2+1	Plant Pathology
5.	SAC 201	Fundamentals of Soil Science	2+1	SS & AC
6.	AMP 201	Livestock and Poultry Production Management	2+1	Animal Husbandry
7.	AEX 201	Fundamentals of Rural Sociology and Educational Psychology	1+1	Agri. Extension
8.	FMP 211	Farm Power and Machinery	1+1	Farm Machinery
9.	ANM 201	Introductory Nematology	1+1	Nematology
		Total	13+9=22	

II Year IV Semester

Sl. No.	Course No.	Course Title	Credit Hours	Department
1.	AGR 203	Agronomy of field Crops- I	1+1	Agronomy
2.	HOR 211	Production Technology of Fruits and Plantation Crops	2+1	Horticulture
3.	SST 201	Principles of Seed Technology	2+1	SS & T
4.	SWC 211	Fundamentals of Soil and Water Conservation Engineering	2+1	Soil and Water Conservation
5.	FOR 211	Forest Resource Management	1+ 1	Forestry
6.	ARM 201	Fundamentals of Agribusiness Management	1+1	Agri. Economics/ ARM
7.	ABT 201	Principles of Biotechnology	1+1	Agricultural Biotechnology
8.	STA 211	Applied Statistics	1+1	PS&IT
9.	ERG 211	Renewable Energy	1+0	Bioenergy
10.	AGR 204	Study Tour – I	0+1	Agronomy
11.	SER 201	Sericulture Technologies	1+1	Sericulture
		Total	13+10=23	

III Year V Semester

Sl. No.	Course No.	Course Title	Credit Hours	Department
1.	AGR 301	Crop Production	0+1	Agronomy
2.	AGR 302	Agronomy of field Crops- II	1+1	Agronomy
3.	AGR 303	Study Tour – II	0+1	Agronomy
4.	SAC 301	Crop and Pesticide Chemistry	2+1	SS & AC
5.	AEN 301	Pests of Field Crops and their Management	2+1	Agri. Entomology
6.	PAT 301	Diseases of Field Crops and Their Management	2+1	Plant Pathology
7.	HOR 311	Production Technology of Vegetables and Spice crops	2+1	Horticulture
8.	NST 301	Fundamentals and Applications of nanotechnology	1+0	Nano Technology
9.	AEC 301	Production Economics and Farm Management	1+1	Agri. Economics
10.	ABT 301	Applied Plant Biotechnology	1+1	Biotechnology
11.	FPE 301	Post Harvest and Food Engineering	1+1	Engineering
		Total	13+10=23	

III Year VI Semester

Sl. No.	Course No.	Course Title	Credit Hours	Department
1.	AGR 304	Principles and practices of cropping and Farming System	2+1	Agronomy
2.	SAC 302	Soil Resource Inventory and Problem Soils	2 + 1	SS & AC
3.	PBG 301	Principles and Methods of Plant Breeding	2 + 1	PB & G
4.	HOR 312	Production Technology of Flower Crops, Medicinal and Aromatic Crops	2+1	Horticulture
5.	AEX 301	Extension Methodologies and Transfer of Agricultural Technology	1 +1	Agri. Extension
6.	AEC 302	Agricultural Marketing, Trade and Prices	1 +1	Agri. Economics
7.	ENG 301	Soft skills for Employability	0+1	English
8.	EXP 301	Experiential Learning - 1	0+5	
		Total	10+12=22	

IV Year VII Semester

Sl. No.	Course No.	Course Title	Credit Hours	Department
1.	AEX 401	Rural Agricultural Work Experience - RAWE (VSP+ADO+NGO+INDUSTRY)	0 + 6	Agri. Extension
2.	APW 401	Project Work	0 + 4	
3.	AEX 402	All India Tour	0 + 1	Agri. Extension
Total			0+11=11	

IV Year VIII Semester

Sl. No	Course No.	Course Title	Credit Hours	Department
1.	AGR 401	Organic Farming	1+1	Agronomy
2.	PBG 401	Breeding Field Crops and Horticulture crops	2+1	PB & G
3.	SAC 401	Nutrient Management and Fertilizer Technology	2+1	SS & AC
4.	AEN 401	Pests of Horticultural Crops and their Management	2+1	Agri. Entomology
5.	PAT 401	Diseases of Horticultural crops and their management	2+1	Plant Pathology
6.	AEC 401	Agricultural Finance, Banking and Co-operation	1+1	Agri. Economics
7.	TAM 401 /ENG 401	இலக்கியங்களில் வேளாண்மையும் அறிவியல் தமிழ் பயணக்கமும் / Development Education – for non Tamil students	0+1	Tamil / English
8.	EXP 401	Experiential Learning – II	0+5	
Total			10+12=22	

ABSTRACT

Semester wise Distribution of Courses for B. Sc. (Agriculture)

Semester	Number of courses	Credit Hours
I	9	7+9=16
II	8	12+9=21
III	9	13+9=22
IV	11	13+10=23
V	11	13+10=23
VI	8	10+12=22
VII	3	0+11=11
VIII	8	10+12=22
Total	67	78+82=160

B.Sc.(Agriculture) : 2011 Syllabi

DEPARTMENT WISE DISTRIBUTION OF COURSES

Agronomy

Sl. No.	Course No.	Course Title	Credit Hours	Semester
1.	AGR 101	Principles of Agronomy and Agricultural Heritage	1+1	I
2.	AGR 102	Fundamentals of Agricultural Meteorology	1+1	II
3.	AGR 201	Weed Management	1+1	III
4.	AGR 202	Irrigation Management	1+1	III
5.	AGR 203	Agronomy of field Crops- I	1+1	IV
6.	AGR 204	Study Tour – I	0+1	IV
7.	AGR 301	Crop Production	0+1	V
8.	AGR 302	Agronomy of field Crops- II	1+1	V
9.	AGR 303	Study Tour –II	0+1	V
10.	AGR 304	Principles and practices of cropping and Farming System	2+1	VI
11.	AGR 401	Organic Farming	1+1	VIII
Total			9+11=20	

Biochemistry

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	BIC 101	Fundamentals of Biochemistry	2+1	II
Total			2+1=3	

Physical Sciences and Information Technology

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	COM 111	Fundamentals of Information Technology	1+1	I
2.	MAT 111	Applied Mathematics	1+1	I
3.	STA 211	Applied Statistics	1+1	IV
Total			3+3=6	

Soil Science and Agricultural Chemistry

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	SAC 101	Principles of Analytical Chemistry	1+1	I
2.	SAC 201	Fundamentals of Soil Science	2+1	III
3.	SAC 301	Crop and Pesticide Chemistry	2+1	V
4.	SAC 302	Soil Resource Inventory and Problem Soils	2+1	VI
5.	SAC 401	Nutrient Management and Fertilizer Technology	2+1	VIII
Total			9+5=14	

Plant Breeding and Genetics

Sl. No.	Course No.	Course Title	Credit Hours	Semester
1.	PBG 101	Introduction to Agricultural Botany	1+1	I
2.	PBG 102	Principles of Genetics	2+1	II
3.	PBG 301	Principles and Methods of Plant Breeding	2+1	VI
4.	PBG 401	Breeding Field Crops and Horticulture crops	2+1	VIII
Total			7+4=11	

Crop Physiology

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	CRP 101	Crop Physiology	2+1	II
Total			2+1=3	

Agricultural Extension

Sl. No.	Course No.	Course Title	Credit Hours	Semester
1.	AEX 101	Dimensions of Agricultural Extension	1+1	II
2.	AEX 201	Fundamentals of Rural Sociology and Educational Psychology	1+1	III
3.	AEX 301	Extension Methodologies and Transfer of Agricultural Technology	1+1	VI
4.	AEX 401	Rural Agricultural Work Experience - RAWE (VSP+ADO+NGO+INDUSTRY)	0+6	VII
5.	AEX 402	All India Tour	0+1	VII
Total			3+10=13	

Agricultural Economics

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	AEC 101	Principles of Agricultural Economics	1+1	II
2.	AEC 301	Production Economics and Farm Management	1+1	V
3.	AEC 302	Agricultural Marketing, Trade and Prices	1+1	VI
4.	AEC 401	Agricultural Finance, Banking and Co-operation	1+1	VIII
Total			4+4=8	

Horticulture

Sl. No.	Course No.	Course Title	Credit Hours	Semester
1.	HOR 111	Fundamentals of Horticulture	1+1	II
2.	HOR 211	Production Technology of Fruits and Plantation Crops	2+1	IV
3.	HOR 311	Production Technology of Vegetables and Spice crops	2+1	V
4.	HOR 312	Production Technology of Flower Crops, Medicinal and Aromatic Crops	2+1	VI
Total			7+4=11	

Environmental Sciences

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	ENS 101	Principles of Environmental Sciences	1+1	II
Total			1+1=2	

Agricultural Microbiology

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	AGM 101	Agricultural Microbiology	2+1	I
Total			2+1=3	

Home Science

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	FSN 111	Principles of food science and processing	1+ 1	II
Total			1+1=2	

Agricultural Entomology

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	AEN 201	Fundamentals of Entomology	2+1	III
2.	AEN 301	Pests of Field Crops and their Management	2+1	V
3.	AEN 401	Pests of Horticultural Crops and their Management	2+1	VIII
Total			6+3=9	

Plant Pathology

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	PAT 201	Fundamentals of Plant Pathology	2+1	III
2.	PAT 301	Diseases of Field Crops and Their Management	2+1	V
3.	PAT 401	Diseases of Horticultural crops and their management	2+1	VIII
Total			6+3=9	

Animal Husbandry

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	AMP 201	Livestock and Poultry Production Management	2+1	III
Total			2+1=3	

Agricultural Engineering

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	FMP 211	Farm Power and Machinery	1+1	III
2.	SWC 211	Fundamentals of Soil and Water Conservation Engineering	2+1	IV
3.	ERG 211	Renewable Energy	1+0	IV
4.	FPE 301	Post Harvest and Food Engineering	1+1	V
Total			5+3=8	

Nematology

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	ANM 201	Introductory Nematology	1+1	III
Total			1+1=2	

Seed Science and Technology

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	SST 201	Principles of Seed Technology	2+1	IV
Total			2+1=3	

Forestry

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	FOR 211	Forest Resource Management	1+ 1	IV
Total			1+1=2	

Agricultural and Rural Management

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	ARM 201	Fundamentals of Agribusiness Management	1+1	IV
Total			1+1=2	

Biotechnology

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	ABT 201	Principles of Biotechnology	1+1	IV
2.	ABT 301	Applied Plant Biotechnology	1+1	V
Total			2+2=4	

Sericulture

Sl. No.	Course No.	Course Title	Credit Hours	Semester
1	SER 201	Sericulture Technologies	1+1	IV
Total			1+1=2	

Nanotechnology

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	NST 301	Fundamentals and Applications of nanotechnology	1+0	V
Total			1+0=1	

Languages

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	ENG 101	English for effective communication	0+1	I
2.	ENG 301	Soft skills for Employability	0+1	VI
3.	TAM 401/ ENG 401	இலக்கியங்களில் வேளாண்மையும் அறிவியல் தமிழ் பயணாக்கமும் / Development Education – for non Tamil students	0+1	VIII
Total			0+3=3	

Experiential Learning

Sl. No	Course No.	Course Title	Credit Hours	Semester
1	EXP 301	Experiential Learning - I	0+5	VII
2	EXP 401	Experiential Learning – II	0+5	VIII
Total			0+10=10	

Sl. No.	Course No.	Course Title	Credit Hours	Semester
1.	APW 401	Project Work	0+4	VII
		Total	0+4=4	

NSS / NCC 101

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	NSS/NCC 101	National Service Scheme/ National Cadet Corps	0+1	I
		Total	0+1=1	

Physical Education

Sl. No	Course No.	Course Title	Credit Hours	Semester
1.	PED 101	Physical Education	0+1	I
		Total	0+1=1	

B.SC.(AGRICULTURE) DEPARTMENT WISE DISTRIBUTION OF COURSES

ABSTRACT

Sl.No.	Department wise	No. of courses	Credit hours	Total
1.	Agronomy	11	9+11	20
2.	Biochemistry	1	2+1	3
3.	Physical Science & Information Technology	3	3+3	6
4.	Soil Science & Agrl. Chemistry	5	9+5	14
5.	Plant Breeding and Genetics	4	7+4	11
6.	Crop Physiology	1	2+1	3
7.	Agricultural Extension	5	3+10	13
8.	Agricultural Economics	4	4+4	8
9.	Horticulture	4	7+4	11
10.	Environmental Science	1	1+1	2
11.	Agricultural Microbiology	1	2+1	3
12.	Home Science	1	1+1	2
13.	Agricultural Entomology	3	6+3	9
14.	Plant Pathology	3	6+3	9
15.	Animal Husbandry	1	2+1	3
16.	Agricultural Engineering	4	5+3	8
17.	Nematology	1	1+1	2
18.	Seed Science & Technology	1	2+1	3
19.	Forestry	1	1+1	2
20.	Agri. & Rural Management	1	1+1	2
21.	Biotechnology	2	2+2	4
22.	Sericulture	1	1+1	2
23.	Nanotechnology	1	1+0	1
24.	Languages	3	0+3	3
25.	Experiential Learning	2	0+10	10
26.	Project work	1	0+4	4
27.	NSS /NCC	1	0+1	1
28.	PED	1	0+1	1
	Total	68		160