

**SCHEME OF STUDIES FOR THE DEGREE OF B.Sc.(Hons.) AGRICULTURE
FOUR YEAR COURSE**

Course No.	Title of the Course	Credit hours	Major/ Minor
FIRST SEMESTER			
SS 301	Soil Science-I	4 (2-4)	Major
FRW 301	Agro-Forestry	3 (2-2)	"
Agron 301	Basic Agriculture	4 (2-4)	"
Eng 301	English	2 (2-0)	Supporting
AH 301	Animal Husbandry	4 (2-4)	"
Bot 301	Physiology and Autecology	3 (2-2)	"
RS 301	Rural Sociology	2 (2-0)	"
IS 301	(Islamic Studies)	2 (2-0)	"
	OR		
SSH 301-A	Ethics (for foreign students)	2 (2-0)	"
		24	
SECOND SEMESTER			
SS 302	Soil Science-II	4 (2-4)	Major
FRW 304	Introduction to Range & Wildlife Management	3 (2-2)	"
Agron 302	Principles of Agronomy	3 (2-2)	"
Hort 302	General Horticulture I	4 (3-2)	"
AE 302	Introduction to Agricultural Economics	2 (2-0)	"
Eng 302	English	2 (2-0)	Supporting
Bot 302	Taxonomy and Synecology	3 (2-2)	"
SSH 302	Pakistan Studies	2 (2-0)	"
		23	
THIRD SEMESTER			
PP 401	Introductory Mycology and Bacteriology	4 (3-2)	Major
Ent 401	Introductory Entomology	4 (2-4)	"
PBG 401	Introductory Genetics and Plant Breeding I	4 (3-2)	"
Hort 401	General Horticulture II	4 (3-2)	"
Agron 401	Field Crop Production-I	4 (2-4)	"
AEB 401	Introduction to Agri. Education and Extension	2 (2-0)	"
VMD 461	Preventive Medicine	2 (1-2)	Supporting
IS 401	(Islamic Studies)	2 (2-0)	"
	OR		
SSH 401-A	Pakistan Culture (for foreign students)	2 (2-0)	"
		26	
FORTH SEMESTER			
PP 402	Introductory Plant Pathology	4 (2-4)	Major
Ent 402	Applied Entomology	4 (2-4)	"
PBG 402	Introductory Genetics and Plant Breeding II	4 (3-2)	"
Agron 402	Field Crop Production-II	4 (2-4)	"
FT 402	Food Processing and Preservation	4 (3-2)	"
Hort 402	General Horticulture III	3 (2-2)	"
SSH 402	Pakistan Studies	2 (2-0)	Supporting
		25	
FIFTH SEMESTER			
General Courses			
Agron 501	Arid Zone Agriculture	2 (2-0)	Major
FMP 501	Farm Mechanization	3 (2-2)	Supporting

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Course No.	Title of the Course	Credit hours	Major/ Minor
I&D 501	Irrigation and Drainage Practices	3 (2-2)	"
IS 501	(Islamic Studies)	2 (2-0)	"
SSH 501-A	OR Islamic Culture and Civilization in Pakistan (for foreign students)	2 (2-0)	"
		10	
1. Agronomy (Major)			
Agron 503	Small Grains, Corn, Sorghum and Beans	4 (2-4)	Elective
Agron 505	Field Crop Physiology-I	4 (3-2)	"
SS 505	Soil Fertility and Plant Nutrition	4 (3-2)	Supporting
Chem 501	Physical Chemistry	3 (2-2)	"
		15	
2. Soil Science (Major)			
SS 501	Physical Properties of Soil	3 (2-2)	Elective
SS 503	Chemical Properties of Soil	3 (2-2)	"
SS 505	Soil Fertility and Plant Nutrition	4 (3-2)	"
SS 507	Soil Conservation	2 (2-0)	"
Math 501	Mathematics for Soil Science	3 (3-0)	Supporting
		15	
3. Plant Breeding and Genetics (Major)			
PBG 501	Genetics of Crop Plants-I	5 (3-4)	Elective
PBG 503	Breeding of field Crops-I	5 (3-4)	"
PBG 505	Cytogenetics in Crop Improvement-I	5 (3-4)	"
		15	
4. Agricultural Entomology (Major)			
Ent. 501	Insect Morphology	4 (2-4)	Elective
Ent. 503	Insect Taxonomy	5 (3-4)	"
Ent. 505	Beneficial Insects	3 (2-2)	"
Ent. 507	Household Pests	2 (1-2)	"
		14	
5. Plant Pathology (Major)			
PP 501	Diseases of Field Crops-I (Kharif)	4 (3-2)	Elective
PP 503	Diseases of Vegetable Crops	4 (3-2)	"
PP 505	Introduction to Plant Disease Control	3 (2-2)	"
PP 507	Equipment and Methods of Plant Disease Control	3 (2-2)	"
		14	
6. Forestry (Major)			
FRW 501	Principles of Forestry	3 (2-2)	Elective
FRW 503	Principles of Range Management	3 (2-2)	"
FRW 505	Principles of Watershed Management	2 (1-2)	"
FRW 507	Principles of Wildlife Management	2 (1-2)	"
FRW 509	Morphology/Physiology of Trees and Range Vegetation	3 (2-2)	"
FRW 511	Survey and Engineering in Forests and Ranges	2 (1-2)	"
		15	
7. Horticulture (Major)			
Hort 501	Principles of Fruit Production	5 (3-4)	Elective
Hort 503	Winter Vegetables	3 (2-2)	"
Hort 505	Ornamental Horticulture	3 (2-2)	"

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Course No.	Title of the Course	Credit hours	Major/ Minor
Chem 502	Chemistry and Fundamental Biochemistry	4 (3-2)	"
		15	
8. Agri. Education and Extension (Major)			
AEE 501	Interaction to Communication	3 (3-0)	Elective
AEE 502	Extension Educational Psychology	4 (4-0)	"
AEE 503	Extension Education in Agriculture	4 (4-0)	"
AEE 504	Teaching Methods in Agriculture	4 (3-2)	"
		15	
9. Food Technology (Major)			
FT 501	Principles of Food Preservation-I	4 (3-2)	Elective
FT 502	Principles of Food Preservation-II	3 (2-2)	"
VMB 551	General Microbiology	3 (1-4)	Supporting
Chem 502	Chemistry and Fundamental Biochemistry	4 (3-2)	"
		14	
10. Agri. Economics (Major)			
AE 551	Micro-Economics-I	4 (4-0)	Elective
AE 553	Macro-Economics-I	4 (4-0)	"
AE 557	Mathematical Economics	3 (3-0)	"
CC 554	Cooperative Theory and Practice	3 (3-0)	Supporting
		14	
SIXTH SEMESTER			
General Courses			
Agro 502	General Agronomy-I	5 (2-6)	Major
Stat 501	Introduction to Statistics	2 (2-0)	Supporting
Stat 502	Experimental Design	2 (2-0)	"
SSH 502	Pakistan Studies	2 (2-0)	"
		11	
1. Agronomy (Major)			
Agro 504	Fibre, Sugar and Miscellaneous Crops	4 (2-4)	Elective
Agro 506	Field Crop Physiology-II	4 (3-2)	"
SS 605	Methods of Soil and Plant Analysis	3 (1-4)	Supporting
Chem 502	Chemistry Fundamental Bio-chemistry	4 (3-2)	"
		15	
2. Soil Science (Major)			
SS 502	Salt-Affected Soils and Quality	4 (3-2)	Elective
SS 504	Soil Microbiology and Biochemistry	4 (3-2)	"
SS 506	Soil Genesis and Morphology	3 (2-2)	"
Bot 501	Advanced Botany-I	4 (3-2)	Supporting
		15	
3. Plant Breeding and Genetics (Major)			
PBG 502	Genetics of Crop Plants-II	5 (3-4)	Elective
PBG 504	Breeding of Field Crops-II	5 (3-4)	"
PBG 506	Cytogenetics in Crop Improvement-II	5 (3-4)	"
		15	
4. Agricultural Entomology (Major)			
Ent 502	Insect Physiology	4 (2-4)	Elective
Ent 504	Classification of Adult Insects	5 (3-4)	"

**SCHEME OF STUDIES FOR THE DEGREE OF B.Sc.(Hons.) AGRICULTURE
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Course No.	Title of the Course	Credit hours	Major/ Minor
Ent 506	Insect Pest Management	4 (3-2)	"
Ent 508	Stored Grain Pest Management	2 (1-2)	"
		15	
5. Plant Pathology (Major)			
PP 502	Diseases of Field Crops-II (Rabi)	4 (3-2)	Elective
PP 504	Diseases of Fruits and Ornamental Plants	4 (3-2)	"
PP 506	Plant Virology	4 (3-2)	"
PP 508	Bacterial Diseases of Plants	3 (2-2)	"
		15	
6. Forestry (Major)			
FRW 502	Forests and Rangelands of Pakistan	3 (2-2)	Elective
FRW 504	Watersheds of Pakistan	2 (1-2)	"
FRW 506	Wildlife of Pakistan	2 (1-2)	"
FRW 508	Forest Biometrics	3 (2-2)	"
FRW 510	General Silviculture	3 (2-2)	"
LM 516	Management of Range Livestock	2 (1-2)	Supporting
		15	
7. Horticulture (Major)			
Horti 502	Production of Fruits	5 (3-4)	Elective
Horti 504	Summer Vegetables	3 (2-2)	"
Horti 506	Landscape Plants	3 (2-2)	"
Bot 501	Advanced Botany I	4 (3-2)	"
		15	
8. Agri. Education and Extension (Major)			
AEE 505	Audio-Visual Aids in Teaching	4 (2-4)	Elective
AEE 506	Programme Development	4 (3-2)	"
AEE 507	Agricultural Education in Pakistan	3 (3-0)	"
AEE 508	Administration and Supervision	4 (4-0)	"
		15	
9. Food Technology (Major)			
FT 503	Introductory Cereal Technology	2 (2-0)	Elective
FT 504	Introduction to Processing of Oils & Fats	2 (2-0)	"
FT 505	Technology of Sugar Production	2 (2-0)	"
FT 506	Meat and Fish Processing	2 (2-0)	"
FT 507	Poultry and Eggs Processing	2 (2-0)	"
FT 508	Fundamentals of Milk Processing	2 (2-0)	"
FT 509	Introduction to Foods and Nutrition	3 (3-0)	"
		15	
10. Agri. Economics (Major)			
AE 552	Micro-Economics-II	4 (4-0)	Elective
AE 554	Macro-Economics-II	4 (4-0)	"
AE 555	Economic Development	4 (4-0)	"
AM 605	Agri. Marketing	3 (3-0)	Supporting
		15	

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Course No.	Title of the Course	Credit hours	Major/ Minor
SEVENTH SEMESTER			
General Courses			
Agron 601	General Agronomy-II	4 (2-4)	Major
AE 601	Agri. Economics	3 (3-0)	"
FM 502	Farm Records and Planning	2 (2-0)	Supporting
IS 601	(Islamic Studies)	2 (2-0)	"
SSH 601-A	OR Islamic Culture and Civilization in Pakistan (for foreign students)	2 (2-0)	"
		11	
1. Agronomy (Major)			
Agron 603	Biological Crop Potential	4 (3-2)	Elective
Agron 605	Conservation Agronomy	4 (3-2)	"
Agron 607	Crop Ecology	3 (3-0)	"
Agron 609	Environmental Physiology and Crop Improvement	4 (3-2)	"
		15	
2. Soil Science (Major)			
SS 601	Soil Water Relationships	3 (2-2)	Elective
SS 603	Soil Survey	3 (2-2)	"
SS 605	Methods of Soil and Plant Analysis	3 (1-4)	"
SS 607	Soils of Pakistan	2 (2-0)	"
Chem 502	Chemistry and Fundamental Biochemistry	4 (3-2)	Supporting
		15	
3. Plant Breeding and Genetics (Major)			
PBG 601	Breeding of Fibre Crops	5 (2-6)	Elective
PBG 603	Breeding of Maize and Millets	5 (2-6)	"
PBG 605	Breeding of Tobacco and Oilseed Crops	5 (2-6)	"
		15	
4. Agricultural Entomology (Major)			
Ent. 601	Insect Life and Natural History	3 (2-2)	Elective
Ent. 603	Agricultural Pests-I	5 (3-4)	"
Ent. 605	Insect Ecology	3 (2-2)	"
Ent. 607	Insecticides and their Application	4 (3-2)	"
		15	
5. Plant Pathology (Major)			
PP 601	Introductory Plant Nematology	3 (2-2)	Elective
PP 603	Principles of Plant Disease Control	4 (3-2)	"
PP 605	Farm Crop Pathology-I	5 (2-6)	"
		12	
6. Forestry (Major)			
FRW 601	Urban Forestry	2 (1-2)	Elective
FRW 603	Wood Science	3 (2-2)	"
FRW 605	Forest Management	2 (1-2)	"
FRW 607	Breeding of Forest Trees and Range Grasses	2 (1-2)	"
FRW 609	Fodder and Forage Production in Ranges	2 (1-2)	"
FRW 611	Forest/Range Pests and Diseases	2 (1-2)	"
AN 615	Nutrition of Forest/Range Vegetation	2 (1-2)	Supporting
		15	

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Course No.	Title of the Course	Credit hours	Major/ Minor
7. Horticulture (Major)			
Hort 601	Research Methods in Horticulture	4 (2-4)	Elective
Hort 603	Breeding of Horticultural Plants	4 (3-2)	"
Hort 605	Propagation and Nursery Management	4 (2-4)	"
Hort 607	Commercial Flower Production	3 (2-2)	"
		15	
8. Agri. Education and Extension (Major)			
AEB 602	Approaches to Rural Development in Pakistan	4 (3-2)	Elective
AEB 603	Project Development and Report Writing	3 (2-2)	"
AEB 604	Preparing Rural Youth for Agricultural Development	4 (4-0)	"
AEB 605	Research Methods in Education and Extension	4 (3-2)	"
		15	
9. Food Technology (Major)			
FT 601	Food Microbiology	4 (3-2)	Elective
FT 602	Chemistry and Biochemistry of Foods	4 (4-0)	"
FT 603	Food Analysis and Evaluation	4 (2-4)	"
FT 606	Carbonated and Non Carbonated Beverages	3 (2-2)	"
		15	
10. Agri. Economics (Major)			
AE 602	Economic Development and Foreign Trade in Agriculture	4 (4-0)	Elective
FM 602	Principle of Farm Management	3 (3-0)	Supporting
RS 603	Demography of Pakistan	2 (2-0)	"
CC 605	Agricultural Finance	3 (3-0)	"
RS 604	Research Methods in Social Sciences	3 (3-0)	"
		15	
EIGHTH SEMESTER			
1. Agronomy (Major)			
Agron 602	Preparation of Research Projects	5 (2-6)	Elective
Agron 604	Writing of Research Reports and Seminars	5 (2-6)	"
Agron 606	Field Training at Experimental Stations	5 (1-8)	"
Agron 608	Excursion in the Rural Areas	5 (1-8)	"
Agron 610	Applied Agronomy	3 (2-2)	"
SSH 602	Pakistan and the Modern World	2 (2-0)	Supporting
		25	
2. Soil Science (Major)			
SS 602	Research Projects	5 (1-8)	Elective
SS 604	Field Trips	5 (0-10)	"
SS 606	Field Problems and Progress	5 (5-0)	"
SS 608	Experimental Planning	5 (0-10)	"
SS 610	Nutrient Diagnostic Techniques	3 (1-4)	"
SS 612	Literature Review	1 (0-2)	"
SSH 602	Pakistan and the Modern World	2 (2-0)	Supporting
		26	
3. Plant Breeding and Genetics (Major)			
PBG 602	Breeding of Sugar Crops	4 (2-4)	Elective
PBG 604	Breeding of Cereal Crops	5 (2-6)	"

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Course No.	Title of the Course	Credit hours	Major/ Minor
PBG 606	Breeding of Pulse Crops	5 (2-6)	"
PBG 608	Breeding of Forage Crops	5 (2-6)	"
PBG 610	Methods in Genetics	3 (0-6)	"
PBG 612	Field Trips	3 (0-6)	"
SSH 602	Pakistan and the Modern World	2 (2-0)	Supporting
		27	
4. Agricultural Entomology (Major)			
Ent 602	Pest Scouting and Forecasting	4 (2-4)	Elective
Ent 604	Agricultural Pests-II	5 (3-4)	"
Ent 606	Insect Behaviour	3 (2-2)	"
Ent 608	Field Entomology	5 (2-6)	"
Ent 610	Plant Resistance to Insect Pests	3 (2-2)	"
Ent 612	Entomological Literature and Experimental Designs	5 (2-6)	"
SSH 602	Pakistan and the Modern World	2 (2-0)	Supporting
		27	
5. Plant Pathology (Major)			
PP 602	Advanced Plant Pathology	5 (3-4)	Elective
PP 604	Methods and Research Techniques in Plant Pathology	5 (3-4)	"
PP 606	Plant Resistance to Diseases	3 (2-2)	"
PP 608	Weeds and their Control	3 (2-2)	"
PP 610	Study Tours and Field Trips	4 (1-6)	"
PP 612	Farm Crop Pathology-II	5 (2-6)	"
SSH 602	Pakistan and the Modern World	2 (2-0)	Supporting
		27	
6. Forestry (Major)			
FRW 602	Forest/Range Ecology	3 (2-2)	Elective
FRW 604	Forestry and Integrated Land Use	2 (1-2)	"
FRW 606	Wildlife Sanctuaries and Game Reserve Management	2 (1-2)	"
AM 608	Forest/Range Economics and Marketing	3 (3-0)	"
FRW 610	Forest Products and Utilization	3 (2-2)	"
FRW 612	Afforestation of Degraded Lands	2 (1-2)	"
FRW 614	Range Improvement and Utilization	2 (1-2)	"
FRW 616	Forest/Range Research Methods and Planning	3 (2-2)	"
FRW 618	Forest/Range Wildlife Policies and Laws	2 (2-0)	"
FRW 620	Research Project and Seminar	3 (0-6)	"
SSH 602	Pakistan and the Modern World	2 (2-0)	Supporting
		27	
7. Horticulture (Major)			
Hort 602	Supervised Research	4 (1-6)	Elective
Hort 604	Vegetable and Flower Seed Production	4 (3-2)	"
Hort 606	Green House Crops	3 (1-4)	"
Hort 608	Post Harvest Horticulture	4 (3-2)	"
Hort 610	Indoor and House Plants	3 (2-2)	"
Hort 612	Internship in Fruit	2 (0-4)	"
Hort 614	Internship in Vegetables	2 (0-4)	"
Hort 616	Internship in Floriculture	2 (0-4)	"
Hort 618	Oral Presentation	1 (1-0)	"

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Course No.	Title of the Course	Credit hours	Major/ Minor
SSH 602	Pakistan and the Modern World	2 (2-0)	Supporting
		27	
8. Agri. Education and Extension (Major)			
AEE 606	Teaching Procedures and Conducting Teaching	5 (1-8)	Elective
AEE 607	Successful Planning and Practices for the Adult Farmers	5 (2-6)	"
AEE 608	Writing and Presentation of Reports on Field Experiences	5 (1-8)	"
AEE 609	On-Farm Extension Work-I	5 (1-8)	"
AEE 610	On-Farm Extension Work-II	5 (1-8)	"
SSH 602	Pakistan and the Modern World	2 (2-0)	Supporting
		27	
9. Food Technology (Major)			
FT 604	Unit Operation in Food Processing-I Conversion Operations	4 (4-0)	Elective
FT 605	Unit Operations in Food Processing-II Preservation Operations	4 (4-0)	"
FT 607	Post Harvest Physiology of Fruits and Vegetables	3 (2-2)	"
FT 608	National and International Food Laws	3 (2-2)	"
FT 609	Practical Training in Food Industries	5 (0-10)	"
FMP 625	Process Engineering	3 (2-2)	Supporting
SSH 602	Pakistan and the Modern World	2 (2-0)	"
		24	
10. Agri. Economics (Major)			
RS 605	Local Government System and Rural Development	4 (3-2)	Supporting
AE 603	Farm Water Resources Management	3 (2-2)	Elective
AE 604	Planning for Agricultural Development	3 (3-0)	"
RS 606	Diffusion and Adoption of Farm Technology	3 (3-0)	Supporting
AM 606	Factor Product Markets in Agriculture	2 (2-0)	"
FM 603	Land Economics and Farm Appraisal	3 (2-2)	"
AE 606	Economic Statistics and Econometrics	3 (3-0)	Elective
SSH 602	Pakistan and the Modern World	2 (2-0)	Supporting
		23	

COURSES OF STUDIES FOR B.Sc. AGRICULTURAL ENGINEERING

Course No.	Title of the Course	Credit hours	Major/ Minor
FIRST SEMESTER			
BE 351	Engineering Drawing-I	3 (1-4)	Major
BE 352	Surveying-I	3 (1-4)	"
ID 353	Fluid Mechanics-I	4 (2-4)	"
FMP 354	Metallurgy	3 (2-2)	"
MATH 355	Algebra and Vector Geometry	3 (3-0)	Supporting
Phy 356	Applied Physics-I	3 (2-2)	"
Eng. 301	English I (Int. Exer. Read. Comp. & Com. Skills)	2 (2-0)	"
SSH 302	Pakistan Studies	2 (2-0)	"
		23	
SECOND SEMESTER			
BE 361	Engineering Drawing-II	3 (1-4)	Major
BE 362	Surveying-II	2 (1-2)	"
BE 363	Engineering Mechanics-I	4 (3-2)	"
ID 364	Fluid Mechanics-II	4 (3-2)	"
FMP 365	Manufacturing Processes and Practices-I	3 (1-4)	"
CHEM 367	Industrial Chemistry	3 (2-2)	Supporting
Eng. 302	English II	2 (2-0)	"
IS 301	(Islamic Studies) OR	2 (2-0)	"
SSH 301A	Ethics (for foreign students)		
		23	
THIRD SEMESTER			
BE 451	Engineering Mechanics-II	3 (2-2)	Major
BE 452	Mechanics of Materials-I	3 (2-2)	"
ID 453	Hydraulic Machinery	3 (2-2)	"
FMP 454	Manufacturing Processes and Practices-II	3 (2-2)	"
MATH 455	Calculus for Engineers	3 (3-0)	Supporting
Phy. 456	Applied Physics-II	3 (2-2)	"
Agron 301	Basic Agriculture	4 (2-4)	"
SSH 401	Pakistan Studies	2 (2-0)	"
		24	
FOURTH SEMESTER			
BE 461	Mechanics of Materials-II	3 (2-2)	Major
ID 462	Hydrology	3 (2-2)	"
ID 463	Soil Mechanics-II	3 (2-2)	"
ID 464	Open Channel Hydraulics	4 (2-4)	"
FMP 465	Thermodynamics	4 (2-4)	"
FMP 466	Dynamics of Machines	3 (2-2)	"
Math 467	Differential equations for Engineers	3 (3-0)	Supporting
IS 401	(Islamic Studies) OR	2 (2-0)	"
SSH 401A	Pakistan Culture (for foreign students)		
		25	
FIFTH SEMESTER			
BE 551	Theory and Design of structures-I	3 (2-2)	Major
BE 552	Rural Electrification	3 (2-2)	"
FMP 553	I.C. Engines and Tractors-I	4 (2-4)	"

COURSES OF STUDIES FOR B.Sc. AGRICULTURAL ENGINEERING

Course No.	Title of the Course	Credit hours	Major/ Minor
FMP 554	Engineering Analysis	3 (2-2)	"
SS 401	General Soil Science	3 (2-2)	Supporting
AE 556	Economics for Engineers	3 (3-0)	"
Agron 401	Field crop Production-I	4 (2-4)	"
SSH 502	Pakistan Studies-III	2 (2-0)	"
		25	
SIXTH SEMESTER			
BE 561	Theory of Structures-II	2 (2-0)	Major
ID 562	Conservation Engineering	3 (2-2)	"
ID 563	Ground Water Hydrology	3 (2-2)	"
FMP 564	Process Engineering	3 (2-2)	"
FMP 565	I.C. Engines and Tractors-II	4 (2-4)	"
SS 402	Salt Affected and Water Logged Soils	3 (2-2)	Supporting
Agron 402	Field crop Production-II	4 (3-2)	"
IS 501	(Islamic Studies)	2 (2-0)	"
	OR		
SSH 501A	Islamic Culture and Civilization in Pakistan (for foreign students)		
		24	
SEVEN SEMESTER			
BE 651	Farm Structures and Materials	3 (2-2)	Major
ID 652	Irrigation Engineering	4 (2-4)	"
FMP 653	Machine Design-I	3 (2-2)	"
FMP 654	Farm Machinery-I	4 (2-4)	"
Math 655	Computer Programming	3 (2-2)	Supporting
Math 656	Statistics	3 (2-2)	"
AEE 401	Introduction to Agricultural Education & Extension	2 (2-0)	"
SSH 601	Pakistan and the Modern World	2 (2-0)	"
		24	
EIGHTH SEMESTER			
ID 661	Environmental Engineering	3 (2-2)	Major
ID 662	Drainage Engineering	4 (2-4)	"
ID 663	farm Water Management	3 (2-2)	"
FMP 664	Machine Design-II	3 (2-2)	"
FMP 665	Instrumentation	3 (2-2)	"
FMP 666	Farm Machinery-II	4 (2-4)	"
AENG 667	Technical report Writing	2 (2-0)	"
IS 601	(Islamic Studies)	2 (2-0)	Supporting
	OR		
SSH 601A	Islamic Culture and Civilization in Pakistan-II (for foreign students)		
		24	

COURSES OF STUDY FOR DOCTOR OF VETERINARY MEDICINE

Course No.	Title of the Course	Credit hours
FIRST SEMESTER		
(a) Major Courses		
V.An 302	Gross Anatomy-I	5 (1-8)
V.An 304	General Histology and Embryology	4 (2-4)
V.Ph 312	Physiological Chemistry	4 (3-2)
V.Ph 313	General Physiology	4 (2-4)
(b) Supporting Courses		
Eng. 301	Introductory Exercises in Reading Comprehension and Communication Skills	2 (2-0)
SSH 302	Pakistan Studies	2 (2-0)
		21
SECOND SEMESTER		
(a) Major Courses		
V.An. 303	Gross Anatomy-II	5 (1-8)
V.An. 305	Systemic Histology	4 (2-4)
V.Ph. 314	Metabolic and Endocrine Physiology	3 (2-2)
(b) Supporting Courses		
Eng. 302	Advanced Exercises in Reading, comprehension and Communication Skills	2 (2-0)
L.M. 313	Management of Farm Animals	4 (3-2)
I.S. 301	(Islamic Studies)	2 (2-0)
	OR	
SSH 301A	Ethics (for foreign students)	2 (2-0)
Zool 301	Inland Fisheries and Games	3 (3-0)
		23
THIRD SEMESTER		
(a) Major Courses		
V.Pl. 441	General Pathology	5 (3-4)
V.Ph. 415	Neuromuscular Physiology	3 (2-2)
V.Pr. 431	General Parasitology and Protozoology	3 (2-2)
V.Pm. 421	Pharmacology-I	5 (3-4)
V.Mb. 451	Microiology-I	3 (2-2)
(b) Supporting Courses		
PH 433	Poultry Husbandry	3 (2-2)
SSH 402	Pakistan Studies	2 (2-0)
		24
FOURTH SEMESTER		
(a) Major Courses		
V.Pl. 442	Systemic Pathology	5 (3-4)
V.Pm. 422	Pharmacology-II	4 (2-4)
V.Mb. 452	Microbiology-II	5 (3-4)
V.Pr. 432	Helminthology	4 (2-4)
(b) Supporting Courses		
NUTR 424	Animal Nutrition	4 (3-2)
I.S. 401	(Islamic Studies)	2 (2-0)
	OR	
SSH 401A	Pakistan Culture (for foreign students)	2 (2-0)
		24

COURSES OF STUDY FOR DOCTOR OF VETERINARY MEDICINE

Course No.	Title of the Course	Credit hours
FIFTH SEMESTER		
(a) Major Courses		
V.An. 506	Applied Anatomy	1 (0-2)
V.Pl. 543	Clinical Pathology	2 (0-4)
V.Pl. 544	Poultry Pathology	3 (2-2)
V.Pr. 533	Vet. Entomology	4 (2-4)
V.Mb. 553	General Virology	2 (1-2)
V.Md. 563	Medicine-I	4 (3-2)
(b) Supporting Courses		
R.S. 402	Rural Sociology	2 (2-0)
ABG 504	Genetics, Biometry and Animal Breeding	5 (4-2)
SSH 502	Pakistan Studies	2 (2-0)
		25
SIXTH SEMESTER		
(a) Major Courses		
V.Mb. 554	Systemic Virology	4 (2-4)
V.Md. 564	Medicine-II	3 (3-0)
V.Sg. 571	Surgery-I	5 (3-4)
V.Ar. 581	Animal Reproduction and A.I.	5 (3-4)
V.Md. 565	Medicine Clinic-I	1 (0-2)
V.Sg. 572	Surgery Clinic-I	1 (0-2)
V.Ar. 591	Animal Reproduction, Clinic-I	1 (0-2)
(b) Supporting Courses		
A.E. 301	Introduction to Agri. Economics	2 (2-0)
IS 501	(Islamic Studies)	2 (2-0)
	OR	
SSH 501A	Islamic Culture and Civilization in Pakistan-I (for foreign students)	2 (2-0)
		24
SUMMER SESSION		
V.Ar. 592	Animal Reproduction Clinic-II	2 (0-4)
V.Md. 566	Medicine Clinic-II	2 (0-4)
V.Sg. 573	Surgery Clinic-II	2 (0-4)
		6
SEVENTH SEMESTER		
(a) Major Courses		
V.Sg. 672	Surgery-II	5 (3-4)
V.Md. 665	Medicine-III	3 (3-0)
V.Mb. 655	Epizootology	2 (2-0)
V.Pr. 634	Meat Hygiene	2 (1-2)
V.Ar. 682	Obstetrics and Gynaecology	4 (2-4)
V.Ar. 693	Animal Reproduction Clinic-III	2 (0-4)
V.Md. 667	Medicine Clinic-III	2 (0-4)
V.Sg. 674	Surgery Clinic-III	2 (0-4)
(b) Supporting Courses		
SSH 602	Pakistan and the Modern World	2 (2-0)
		24

COURSES OF STUDY FOR DOCTOR OF VETERINARY MEDICINE

Course No.	Title of the Course		Credit hours
EIGHTH SEMESTER			
(a) Major Courses			
V.Mb. 656	Milk Hygiene		2 (1-2)
V.Md. 666	Medicine-IV		5 (5-0)
V.Sg. 673	Radiology, Shoeing and Soundness		4 (2-4)
V.Md. 668	Medicine Clinic-IV		2 (0-4)
V.Sg. 675	Surgery Clinic-IV		2 (0-4)
V.Ar. 694	Animal Reproduction Clinic-IV		2 (0-4)
R.D. 502	Project Studies		1 (0-2)
(b) Supporting Courses			
ABE 601	Introduction to Agri. Education and Extension		2 (2-0)
IS 601	(Islamic Studies)		2 (2-0)
	OR		
SSH 601A	Islamic Culture and Civilization in Pakistan-II (for foreign students)		2 (2-0)
			22

COURSES OF STUDY OF B.Sc. (Hons.) ANIMAL HUSBANDRY

Course No.	Title of the Course	Credit hours
FIRST SEMESTER		
(a) Major Courses		
ABG 301	Introductory Genetics	2 (2-2)
LM 311	Livestock Management-I	3 (2-2)
AN 321	Fundamentals of Animal Nutrition	3 (2-2)
PH 331	Introduction to Poultry Husbandry	3 (2-2)
(b) Supporting Courses		
V.An. 301	Veterinary Anatomy	3 (2-2)
CHEM 301	Elementary Biochemistry	4 (3-2)
ENG 301	Introductory Exercises in Reading, Comprehension and Communication Skills	2 (2-0)
FRW 302	Range Management	3 (2-2)
SSH 302	Pakistan Studies	2 (2-0)
		25
SECOND SEMESTER		
(a) Major Courses		
ABG 302	Principles of Heredity	3 (2-2)
LM 312	Livestock Management-II	3 (2-2)
AN 322	Metabolism of Primary Nutrients	3 (2-2)
PH 332	Breeding and Selection in Poultry	3 (2-2)
(b) Supporting Courses		
ZOOL 301	Inland Fisheries and Game	3 (3-0)
ENG 302	Introductory Exercises in Reading, Comprehension and Communication Skills	2 (2-0)
AGRON 305	Fodder Crops (Forage Grasses)	4 (3-2)
V.Ph. 311	Veterinary Physiology	3 (2-2)
IS 301	(Islamic Studies)	2 (2-0)
	OR	
SSH 301A	Ethics (for foreign students)	2 (2-0)
		26
THIRD SEMESTER		
(a) Major Courses		
ABG e	Genetics of Farm Animals	4 (3-2)
LM 411	Sheep Production	4 (3-2)
AN 421	Mineral and Vitamin Metabolism	4 (3-2)
PH 431	Incubation Principles and Practices	4 (3-2)
AN 423	Farm Practices	1 (0-2)
(b) Supporting Courses		
RS 402	Introductory Rural Sociology	2 (2-0)
FT 403	Technology of Meat, Eggs and Milk Products	3 (2-2)
SSH 402	Pakistan Studies	2 (2-0)
		24
FOURTH SEMESTER		
(a) Major Courses		
ABG 402	Genetic Principles in Animal Breeding	4 (3-2)
LM 412	Goat Production	4 (3-2)
AN 422	Measurement of Body Needs and Feed Values	4 (3-2)
PH 432	Poultry Farm Management	4 (3-2)

COURSES OF STUDY OF B.Sc. (Hons.) ANIMAL HUSBANDRY

Course No.	Title of the Course	Credit hours
PH 434	Farm Practices	1 (0-2)
(b) Supporting Courses		
AE 301	Introduction to Agricultural Economics	2 (2-0)
STAT 401	Statistics for Animal Sciences	4 (3-2)
IS 401	(Islamic Studies)	2 (2-0)
	OR	
SSH 401A	Pakistan Culture (for foreign students)	2 (2-0)
		25
FIFTH SEMESTER		
(a) Major Courses		
ABG 501	Theory of Animal Breeding	4 (3-2)
LM 511	Principles of Dairy Cattle Management	4 (3-2)
AN 521	Nutrient Requirements of Farm Animals	4 (3-2)
PH 531	Poultry Housing and Equipment	4 (3-2)
LM 513	Famer Practices	1 (0-2)
(b) Supporting Courses		
V.AR. 580	Reproduction in Livestock	5 (3-4)
FM 501	Planning for Livestock Production	3 (3-0)
SSH 502	Pakistan Studies	2 (2-0)
		27
SIXTH SEMESTER		
(a) Major Courses		
ABG 502	Breeding Systems and Plans	4 (3-2)
LM 512	Principles of Milk Secretion	4 (3-2)
AN 522	Feeding of Farm Animals	4 (3-2)
PH 532	Poultry Feeding Practices	4 (3-2)
ABG 503	Farm Practices	1 (0-2)
(b) Supporting Courses		
V.Md. 562	Introduction to Veterinary Medicine	4 (3-2)
AM 502	Marketing of Livestock, Poultry and their Products	3 (3-0)
IS 501	(Islamic Studies)	2 (2-0)
	OR	
SSH 501A	Islamic Culture and Civilization in Pakistan-I (for foreign students)	2 (2-0)
		26
SEVENTH SEMESTER		
(a) Major Courses		
ABG 601	Selection for Production Traits in Farm Animals	4 (3-2)
LM 611	Range Livestock Production	4 (3-2)
AN 621	Principles of Poultry Nutrition	4 (3-2)
PH 631	Poultry Hygiene and Disease Prevention	4 (3-2)
(b) Supporting Courses		
RD 602	Rural Development (Project Studies)	1 (0-2)
FMP 650	Far Equipment, Structures and Processing	4 (3-2)
V.AR. 680	Animal Reproduction Clinic	1 (0-2)
SSH 602	Pakistan and the Modern World	2 (2-0)
		24

COURSES OF STUDY OF B.Sc. (Hons.) ANIMAL HUSBANDRY

Course No.	Title of the Course		Credit hours
EIGHTH SEMESTER			
(a) Major Courses			
ABG 602	Animal Breeding Practices		4 (3-2)
LM 612	Beef Production Practices		4 (3-2)
AN 622	Animal Feed Industry		4 (3-2)
PH 632	Poultry Industry		4 (3-2)
(b) Supporting Courses			
AEE 601	Introduction to Agri. Education and Extension		2 (2-0)
IS 601	(Islamic Studies)		2 (2-0)
	OR		
SSH 601A	Islamic Culture and Civilization in Pakistan-II (for foreign students)		2 (2-0)
			20

COURSES OF DEGREE PROGRAMME OF B.Sc. HOME ECONOMICS

Course No.	Title of the Course	Credit hours
FIRST SEMESTER (Major)		
RHE 301	Food & Nutrition	4 (3-2)
RHE 302	Clothing & Textile	4 (3-2)
RHE 303	Home Economics Education	3 (3-0)
RHE 304	Psychology of Child & Adolescent	3 (3-0)
		14
SECOND SEMESTER (Major)		
ENG 305	Meal Management & Food Preservation	4 (2-0)
ENG 306	Family Clothing & House Hold Textile	5 (1-8)
ENG 307	Home Nursing	4 (2-4)
ENG 308	Home Management	4 (3-2)
		17
THIRD SEMESTER (Major)		
RHE 401	Dietetics	5 (3-4)
RHE 402	Applied Arts Programme-I	4 (2-4)
RHE 403	Child Development & Family Relation	5 (3-4)
RHE 404	Health & Sanitation	3 (3-0)
		17
FOURTH SEMESTER (Major)		
RHE 405	House Hold Physics	3 (1-4)
RHE 406	An Introduction to Population Studies	3 (3-0)
RHE 407	Applied Arts Programme-II	4 (2-4)
RHE 408	Advanced Food & Nutrition Education	3 (2-2)
RHE 409	Family Economics & Home Management Residence	3 (2-2)
		16

LIST OF COURSES (M. Sc.)

A - FACULTY OF AGRICULTURE

Agronomy		
AGR-701	Advanced Field Crop Production	4 (3-2)
AGR-702	Crop Production and Herbicides	4 (3-2)
AGR-705	Applied Crop Ecology	3 (3-0)
AGR-706	Field Plot Technique	4 (3-2)
AGR-707	Advanced Agronomy	4 (3-2)
AGR-708	Applied Conservation Agronomy	3 (3-0)
AGR-709	Seed Technology	4 (3-2)
AGR-710	Crop Management and Problem Soils	4 (3-2)
AGR-711	Agro Meteorology	3 (3-0)
AGR-712	Advanced Production Technology	3 (3-0)
AGR-713	Recent Advances in Crop Physiology	3 (3-0)
AGR-714	Arid Zone Agronomy	4 (3-2)
AGR-715	Plants Environments and Efficient Water Use	3 (3-0)
AGR-718	Recent Advances in Agronomy	3 (3-0)
AGR-719	Special Problem	1 (1-0)
AGR-720	Seminar	1 (1-0)
Crop Physiology		
C.Phy-701	General Crop Physiology (Deficiency Course)	4 (3-2)
C.Phy-702	Seed Physiology	4 (3-2)
C.Phy-703	Developmental Physiology of Crop Plants	4 (3-2)
C.Phy-704	Physiology of Growth Substances	4 (3-2)
C.Phy-705	Post-harvest Physiology	3 (3-0)
C.Phy-706	Stress Physiology	3 (3-0)
C.Phy-707	Physiology of Drought	3 (3-0)
C.Phy-708	Physiology of Crop Nutrition	3 (3-0)
C.Phy-709	Biological Nitrogen Fixation	3 (2-2)
C.Phy-710	Advanced Crop Physiology	4 (3-2)
C.Phy-712	Plant Molecular Biology	4 (4-0)
C.Phy-719	Special Problem	1 (1-0)
C.Phy-720	Seminar	1 (1-0)
Agri. Entomology		
Ent.701	Research Methods in Entomology	4 (1-6)
Ent.702	Origin and Phylogeny of Insects	3 (3-0)
Ent.703	Environmental Entomology	2 (2-0)
Ent.704	Advanced Insect Morphology	3 (1-4)
Ent.705	Advanced Insect Ecology	3 (2-2)
Ent.706	Numerical Taxonomy	2 (1-2)
Ent.707	Advanced Insect Physiology	3 (2-2)
Ent.708	Microanatomy and Histology of Insects	2 (0-4)
Ent.709	Forest Entomology	2 (1-2)
Ent.710	Insects in Relation to Plant Diseases	3 (2-2)
Ent.711	Insects of Man and Animals	3 (2-2)
Ent.712	Acarology	4 (3-2)
Ent.713	Classification of Immature Insects	4 (2-4)
Ent.714	Insect Toxicology	3 (2-2)
Ent.715	Insect Nutrition	2 (1-2)
Ent.716	Techniques for Testing Insecticides	3 (2-2)

Ent.717	Biological Control of Insect Pests	3 (2-2)
Ent.718	Use of Radiation and Radiolotopes in Entomology	2 (1-2)
Ent.719	Special Problem	1 (1-0)
Ent.720	Seminar	1 (1-0)
Ent.721	Application Equipment for Insecticides	3 (1-4)
Ent.722	Advances in Pest Management Research	2 (2-0)
Forestry		
FRW-701	Silviculture of Farm Trees	4 (3-2)
FRW-702	Commercial Forestry in Irrigated Plains	3 (2-2)
FRW-703	Advances in Agro-Forestry	3 (2-2)
FRW-704	Advances in Agro-Forest Products	3 (2-2)
FRW-705	Strategy for Developing Agro-Grazing	3 (3-0)
FRW-706	Forestry, Wildlife and Recreation	3 (2-2)
FRW-707	Forestry and Environmental Pollution	3 (2-2)
FRW-708	Advances in Range Vegetation Physiology, Ecology	3 (2-2)
FRW-709	Range Livestock, Wildlife Ecology	3 (2-2)
FRW-710	Forest, Range and Atmosphere	3 (2-2)
FRW-711	Role of Institutions in Agro-Forest, Range Productivity	2 (2-0)
FRW-712	International Forestry	2 (2-0)
FRW-713	Urban Wildlife	3 (2-2)
FRW-714	Advances in Watershed Management	3 (2-2)
FRW-715	Lakes and their Management	3 (2-2)
FRW-716	Forest, Range Resource Evaluation	3 (2-2)
FRW-719	Special Problem	1 (1-0)
FRW-720	Seminar	1 (1-0)
Horticulture		
Hort.701	Root Stocks for Fruit Crops	3 (2-2)
Hort.702	Citriculture	3 (2-2)
Hort.703	Advanced Fruit Production	3 (3-0)
Hort.704	Advanced Vegetable Production	3 (3-0)
Hort.705	Vegetable Breeding	3 (2-2)
Hort.706	Fruit Breeding	3 (2-2)
Hort.707	Mineral Nutrition of Horticultural Plants	3 (3-0)
Hort.708	Plant Molecular Techniques	3 (2-2)
Hort.709	Plant Growth Regulators	3 (3-0)
Hort.710	Plant Tissue Culture	3 (1-4)
Hort.711	Micro Propagation	2 (0-4)
Hort.713	Post Harvest Physiology	3 (3-0)
Hort.715	Garden Designs	3 (2-2)
Hort.719	Special Problem	1 (1-0)
Hort.720	Seminar	1 (1-0)
Plant Breeding and Genetics		
PBG-701	Principles of Plant Breeding I (Self-Pollinated Crops)	3 (2-2)
PBG-702	Principles of Plan Breeding II (Cross Pollinated Crops)	3 (2-2)
PBG-703	Breeding of Forage Crops	3 (2-2)
PBG-704	Advanced Methods in Plant Breeding	4 (2-4)
PBG-705	Evolution of Field Crops I	3 (3-0)
PBG-706	Evolution of Field Crops II	3 (3-0)
PBG-707	Cytogenetics of Crop Plants	4 (3-2)
PBG-708	Quantitative Genetics	3 (3-0)
PBG-709	Advanced Cytogenetics I (for Ph.D. students)	4 (3-2)
PBG-710	Advanced Cytogenetics II (for Ph.D. students)	4 (3-2)

PBG-711	Quality Evaluation in Field Crops	3 (3-2)
PBG-712	Advanced Genetics	3 (3-0)
PBG-713	Biometrical Techniques in Plant Breeding	4 (2-4)
PBG-714	Genesis of Gene Concepts	4 (2-4)
PBG-715	Mutation Breeding	3 (2-2)
PBG-716	Cereal Genetics	4 (3-2)
PBG-717	Maize Genetics	4 (3-2)
PBG-718	Cotton Genetics	4 (2-4)
PBG-719	Special Problem	1 (1-0)
PBG-720	Seminar	1 (1-0)
PBG-721	Breeding Oilseed Crops	3 (2-2)
Plant Pathology		
PP-701	Mycology (Lower Fungi)	3 (2-2)
PP-702	Mycology (Ascomycetes and Fungi Imperfecti)	3 (2-2)
PP-703	Mycology (Basidiomycetes)	3 (2-2)
PP-704	Methods and Research Techniques in Plant Pathology	3 (2-2)
PP-705	Physiology of Fungi	3 (2-2)
PP-706	General Plant Pathology (for M.Sc. Bot. students)	4 (3-2)
PP-707	Plant Nematology	4 (2-4)
PP-708	Bacterial and Virus Diseases of Plants	3 (2-2)
PP-709	Weeds and their Control	3 (2-2)
PP-710	Insects in Relation to Plant Diseases	3 (2-2)
PP-711	History of Plant Pathology	3 (3-0)
PP-712	Fungicides, their Action and Application	4 (3-2)
PP-713	Ecology of Plant Pathogens	3 (2-2)
PP-714	Advanced Mycology	4 (3-2)
PP-715	Principles of Plant Pathology	4 (3-2)
PP-716	Genetics of Plant Pathogens	4 (3-2)
PP-717	Advances in Plant Pathology	4 (3-2)
PP-718	Forest and Shade Tree Pathology	4 (2-4)
PP-719	Special Problem	1 (1-0)
PP-720	Seminar	1 (1-0)
PP-721	Seed Pathology	3 (2-2)
PP-722	Plant Virology	4 (2-4)
Soil Science		
SS-701	Laboratory Techniques in Soils	3 (1-4)
SS-702	Soil Chemistry	4 (3-2)
SS-703	Soil Fertility	4 (3-2)
SS-704	Soil Microbiology	4 (3-2)
SS-705	Saline and Sodic Soils	3 (2-2)
SS-706	Instrumentation and Analytical Techniques (Opt. Def.)	2 (1-2)
SS-707	Soil Genesis and Morphology	3 (2-2)
SS-708	Soil Classification	3 (2-2)
SS-709	Salt Affected Soils and Plant Growth	3 (3-0)
SS-710	Soil Physics	4 (3-2)
SS-711	Advanced Soil Chemistry	3 (3-0)
SS-712	Advanced Soil Fertility	3 (3-0)
SS-713	Clay Mineralogy	4 (3-2)
SS-714	Advanced Soil Microbiology	3 (3-0)
SS-715	Soil Plant Relationship	3 (3-0)
SS-716	Soil Biochemistry	3 (3-0)
SS-717	Micronutrients in Soils and Plants	3 (2-2)

SS-718	Radio Tracer Techniques	3 (3-0)
SS-719	Special Problem	1 (1-0)
SS-720	Seminar	1 (1-0)

B - FACULTY OF AGRI. ECONOMICS & RURAL SOCIOLOGY

Agricultural Economics		
AE-701	National Income Accounting	2 (2-0)
AE-702	Land Economics	2 (2-0)
AE-703	History of Economic Thought	2 (2-0)
AE-704	History of Economic Development of U.K., Japan and China	2 (2-0)
AE-705	Agricultural Policy	2 (2-0)
AE-706	Micro Economics	3 (3-0)
AE-708	Macro Economics	3 (3-0)
AE-709	Economic Analysis of Experimental Data	3 (2-2)
AE-710	Economic Development	3 (3-0)
AE-713	Labour Economics	2 (2-0)
AE-714	Introduction to Econometrics	3 (3-0)
AE-715	Economic Analysis and Evaluation of Agricultural Development Projects	2 (2-0)
AE-716	Economic Analysis (for M.Sc./R.S. students)	3 (3-0)
AE-719	Special Problem	1 (1-0)
AE-720	Seminar	1 (1-0)
AE-721	Advanced Microeconomics	3 (3-0)
AE-722	Advanced Macroeconomics	3 (3-0)
AE-723	Advanced Agricultural Policy	3 (3-0)
AE-724	Rural Development	2 (2-0)
AE-725	Advanced Supply and Demand Analysis	3 (3-0)
Agricultural Marketing		
AM-701	Advanced Agricultural Marketing	3 (3-0)
AM-702	Advanced Agricultural Prices	3 (3-0)
AM-703	Marketing of Farm Crops	3 (3-0)
AM-704	Marketing of Livestock, Poultry and their Products	2 (2-0)
AM-705	Marketing of Farm Inputs	2 (2-0)
AM-706	Consumption Analysis	3 (3-0)
AM-707	Marketing Management	3 (3-0)
AM-708	International Trade in Agricultural Commodities	3 (3-0)
AM-709	Foreign Trade in Agriculture	2 (2-0)
AM-710	Special Readings in Agri. Marketing	2 (1-2)
AM-719	Special Problem	1 (1-0)
AM-720	Seminar	1 (1-0)
AM-721	Advanced Marketing Management	3 (3-0)
AM-722	Advanced International Trade	3 (3-0)
AM-723	Physical Distribution Systems	2 (2-0)
AM-724	Advanced Research Techniques in Agri. Marketing	3 (3-0)
AM-725	Agricultural Marketing Policies	3 (3-0)
Cooperation and Credit		
CC-701	Money and Banking	3 (3-0)
CC-702	Cooperatives: Theory and Practice	4 (3-2)
CC-703	Monetary Theory and Fiscal Policy	3 (3-0)
CC-704	Business Cycle	3 (3-0)
CC-705	Business Administration	3 (3-0)

CC-706	Economics of Cooperative Marketing	3 (3-0)
CC-707	Public Finance	4 (4-0)
CC-708	Agricultural Finance	3 (3-0)
CC-709	Financial Management and Portfolio Analysis	3 (3-0)
CC-710	Managerial Economics	3 (3-0)
CC-711	Cooperative Organization and Management	2 (2-0)
CC-719	Special Problem	1 (1-0)
CC-720	Seminar	1 (1-0)
CC-721	Advanced Public Finance	3 (3-0)
Farm Management		
FM-700	An Introduction to Farm Business	4 (3-2)
FM-701	Methods of Farm Management Investigation	3 (3-0)
FM-702	Farm Costs and Farm Appraisal	3 (2-2)
FM-703	Advanced Farm Planning and budgeting	3 (3-0)
FM-704	Applied Linear Programming	3 (3-0)
FM-705	Econometric Methods in Farm Management	4 (4-0)
FM-706	Economics of Agricultural Production	3 (3-0)
FM-707	Applied Production Functions	3 (3-0)
FM-708	Project Preparation and Appraisal	3 (2-2)
FM-712	Dynamic Agricultural Production Economics	3 (3-0)
FM-713	Operations Research Approach to Farm Management	3 (3-0)
FM-714	Advanced Quantitative Production Economics	3 (3-0)
FM-719	Special Problem	1 (1-0)
FM-720	Seminar	1 (1-0)
FM-721	Advanced Econometrics	3 (3-0)
FM-722	Natural Resource Economics	3 (3-0)
FM-723	Advanced Production Economics	3 (3-0)
FM-724	Application of Mathematical Techniques to Farm Management	3 (3-0)
FM-725	Farm Management's Role in Farming Systems Research	3 (3-0)
<i>Note:</i>	1. FM-704 is a pre-requisite for FM-713.	
	2. FM-705 is a pre-requisite for FM-714.	
	3. FM-706 is a pre-requisite for FM-712.	

Rural Sociology		
RS-701	Research Methods in Social Sciences	4 (3-2)
RS-702	Reporting Research	3 (3-0)
RS-703	Social Research Design	3 (3-0)
RS-704	Development of Sociological Thought	3 (3-0)
RS-705	Contemporary Sociological Theory	3 (3-0)
RS-706	Population Trends and Problems in Rural Society	3 (3-0)
RS-707	Techniques of Population Analysis	3 (3-0)
RS-708	Population and Agri. Development	3 (3-0)
RS-709	Diffusion of Information on Agricultural Technology	3 (3-0)
RS-710	Sociology of Rural Life	3 (3-0)
RS-711	Sociology of Developing Countries	3 (3-0)
RS-712	Individual and Society	3 (3-0)
RS-713	Rural Social Organization	3 (3-0)
RS-714	Social Institutions	3 (3-0)
RS-715	Community Development	3 (3-0)
RS-716	Social Problem in Pakistan	3 (3-0)
RS-719	Special Problem	1 (1-0)
RS-720	Seminar	1 (1-0)

C - FACULTY OF AGRICULTURAL ENGINEERING & TECHNOLOGY

Basic Engineering		
BE-701	Advanced Mechanics of Materials	3 (3-0)
Farm Machinery & Power		
FMP-701	Advanced Power and Machinery	4 (3-2)
FMP-702	Experimental Stress Analysis	4 (3-2)
FMP-703	Tillage and Traction Dynamics	4 (3-2)
FMP-704	Harvesting Machinery	4 (3-2)
FMP-705	Instrumentation	4 (3-2)
FMP-706	Theory of Models I	3 (2-2)
FMP-707	Theory of Models II	3 (2-2)
FMP-708	Theory of Manufacturing Process	3 (2-2)
FMP-709	Hydraulic Control System	4 (3-2)
FMP-710	Operations Research	3 (2-2)
FMP-719	Special Problem	1 (1-0)
FMP-720	Seminar	1 (1-0)
Fibre Technology		
Fib Tech-701	Cotton Fibre Technology	3 (2-2)
Fib Tech-702	Vegetable Fibre Technology	3 (2-2)
Fib Tech-703	Wool Fibre Technology	3 (2-2)
Fib Tech-704	Silk and Synthetic Fibre Technology	3 (2-2)
Fib Tech-705	Fibre Chemistry	3 (2-2)
Fib Tech-706	Fibre Microscopy	3 (2-2)
Fib Tech-707	Advanced Fibre Technology I	3 (2-2)
Fib Tech-708	Recent Advances in Fibre Technology I	3 (2-2)
Fib Tech-709	Textile Testing and Quality Control	3 (2-2)
Fib Tech-710	Fibre Physics	3 (2-2)
Fib Tech-711	Advanced Fibre Technology II	3 (2-2)
Fib Tech-712	Recent Advances in Fibre Technology II	3 (2-2)
Fib Tech-713	Pulp, Paper and Card Board Technology I	3 (2-2)

Fib Tech-714	Pulp, Paper and Card Board Technology II	3 (2-2)
Fib Tech-715	Fibre Microbiology I	3 (2-2)
Fib Tech-716	Fibre Microbiology II	3 (2-2)
Fib Tech-717	Dry Cleaning Technology	3 (2-2)
Fib Tech-718	Fibre Processing Practices (3 months training)	3 (0-6)
Fib Tech-719	Special Problem	1 (1-0)
Fib Tech-720	Seminar	1 (1-0)
Fib Tech-723	Laundry Technology	2 (2-0)
Food Technology		
FT-701	Food Chemistry	4 (3-2)
FT-702	Food Analysis and Evaluation	4 (3-2)
FT-703	Food Microbiology	4 (3-2)
FT-704	Industrial Food Microbiology and Bio-technology	4 (3-2)
FT-705	Food Enzymology	4 (3-2)
FT-706	Food Additives, Enrichment and Fortification	3 (3-0)
FT-707	Fundamentals of Food Processing I	4 (3-2)
FT-708	Fundamentals of Food Processing II	4 (3-2)
FT-709	Plant Design and Layout of Food Factories	3 (3-0)
FT-710	Chemical and Biochemical Aspects of Food Processing	3 (3-0)
FT-711	Fruit and Vegetable Beverages	3 (2-2)
FT-712	Food Toxicology	3 (3-0)
FT-713	Fundamentals of Cereal Technology	3 (2-2)
FT-714	Modern Milling Technology of Cereals	3 (2-2)
FT-715	Commercial Manufacturing of Cereal Products	4 (3-2)
FT-716	Starch Derivatives and Flour Confectionery	4 (3-2)
FT-717	Fundamentals of Dairy Science	4 (3-2)
FT-718	Processing Technology of Milk Products I	4 (3-2)
FT-719	Special Problem	1 (1-0)
FT-720	Seminar	1 (1-0)
FT-721	Processing Technology of Milk Products II	4 (3-2)
FT-722	Dairy Bacteriology	4 (3-2)
FT-723	Fundamentals of Edible Oils and Fat Products	4 (3-2)
FT-724	Industrial Processing of Edible Oils and Fat Products	4 (3-2)
FT-725	Meat Science	4 (3-2)
FT-726	Industrial Processing of Meat and Meat Products	4 (3-2)
FT-727	Egg Science and Technology	3 (2-2)
FT-728	Fish Science and Technology	3 (2-2)
FT-729	Fundamentals of Sugar Production	4 (4-0)
FT-730	Technology of Sugar Processing	4 (3-2)
FT-731	Quality Control in Food Industries	4 (3-2)
FT-732	Utilization of By-products of Food Industries	3 (3-0)
FT-733	Dairy Chemistry	4 (3-2)
FT-734	Quality Analysis of Milk and Milk Production	4 (2-4)
FT-735	Physical Aspects of Food Processing-I	4 (3-2)
FT-736	Physical Aspects of Food Processing-II	4 (3-2)

Irrigation and Drainage		
ID-701	Planning and Design of Irrigation Projects	4 (3-2)
ID-702	Advanced Open Channel Hydraulics	4 (3-2)
ID-703	Water-logging and Salinity Control	4 (3-2)
ID-704	Ground Water Hydrology	4 (3-2)
ID-705	Fluid Dynamics	3 (3-0)
ID-706	Fluid Mechanics Laboratory	3 (1-4)
ID-707	Principles and Design of Hydraulic Structures	3 (3-0)
ID-708	Advanced Soil Conservation Engineering	3 (3-0)
ID-709	Design of Drainage Projects	4 (3-2)
ID-719	Special Problem	1 (1-0)
ID-720	Seminar	1 (1-0)

D - FACULTY OF ANIMAL HUSBANDRY

Animal Breeding and Genetics		
ABG-701	General Genetics	4 (3-2)
ABG-702	Population Genetics	4 (3-2)
ABG-703	Animal Breeding Plans	4 (3-2)
ABG-704	Breeding of Farm Animals	4 (3-2)
ABG-705	Advanced Animal Breeding	4 (4-0)
ABG-706	Statistical Methods in Animal Production Research	4 (3-2)
ABG-707	Efficiency of Reproduction in Farm Animals	4 (2-4)
ABG-708	Biometrical Genetics	4 (4-0)
ABG-709	Theory of Genetic Selection	4 (4-0)
ABG-710	Theory of Inbreeding	4 (4-0)
ABG-711	Experimental Techniques in Population Genetics	4 (2-4)
ABG-712	Animal Cytogenetics	4 (3-2)
ABG-719	Special Problem	1 (1-0)
ABG-720	Seminar	1 (1-0)
Livestock Management		
LM-701	Dairy Production	4 (3-2)
LM-702	Milk Secretion and Lactation	4 (3-2)
LM-703	Behaviour of Domestic Animals	4 (3-2)
LM-704	Livestock Industry	4 (4-0)
LM-705	Animal Growth and Adaptation	4 (4-0)
LM-706	Range Livestock Management	3 (2-2)
LM-707	Draught Animals Management	3 (2-2)
LM-708	Advanced Meat Production	4 (3-2)
LM-709	Advanced Sheep and Goat Production	4 (3-2)
LM-710	Advanced Wool and Hair Science	4 (3-2)
LM-711	Trends and Potential of Milk and Meat Production	4 (4-0)
LM-712	Recent Advances in Livestock Management	3 (3-0)
LM-719	Special Problem	1 (1-0)
LM-720	Seminar	1 (1-0)

Animal Nutrition		
AN-701	Physiology and Biochemistry of Nutrition	4 (4-0)
AN-702	Feeds and Feeding	3 (2-2)
AN-703	Energy Metabolism	3 (3-0)
AN-704	Protein Metabolism	3 (3-0)
AN-705	Minerals in Nutrition	3 (2-2)
AN-706	Vitamins in Nutrition	3 (2-2)
AN-707	Analytical Techniques in Nutrition	4 (0-8)
AN-708	Advanced Analytical Techniques in Nutrition	2 (0-4)
AN-709	Research Methods in Animal Nutrition	3 (2-2)
AN-710	Nutrition of Laboratory Animals	2 (1-2)
AN-711	Avian Nutrition	4 (3-2)
AN-712	Equine Nutrition	2 (2-0)
AN-713	Ruminant Nutrition	4 (3-2)
AN-714	Advanced Animal Feed Industry	3 (2-2)
AN-715	Reactions in the Rumen	2 (2-0)
AN-716	Recent Advances in Animal Nutrition	2 (2-0)
AN-717	Veterinary Diagnostics	3 (3-0)
AN-718	Refresher Course on Animal Nutrition (for In Service Graduates)	4 (2-4)
AN-719	Special Problem	1 (1-0)
AN-720	Seminar	1 (1-0)
Poultry Husbandry		
PH-701	Poultry Production	4 (3-2)
PH-702	Poultry Breeding	4 (3-2)
PH-703	Poultry Feeding	4 (3-2)
PH-704	Production of Table Poultry	4 (3-2)
PH-705	Hatchery Operation and Management	4 (3-2)
PH-706	Poultry and Poultry Products	4 (3-2)
PH-707	Poultry Health and Hygiene	4 (3-2)
PH-708	Poultry Housing and Environment	4 (3-2)
PH-709	Advanced Poultry Production	4 (3-2)
PH-710	Avian Physiology	4 (3-2)
PH-711	Avian Embryology	4 (3-2)
PH-712	Recent Advances in Poultry Science	3 (3-0)
PH-719	Special Problem	1 (1-0)
PH-720	Seminar	1 (1-0)

E - FACULTY OF VETERINARY SCIENCE

Veterinary Anatomy		
V.An-701	Histological and Histochemical Techniques	3 (0-6)
V.An-702	Advanced Histology (General)	3 (2-2)
V.An-703	Advanced Histology (Systemic)	4 (2-4)
V.An-704	Comparative Anatomy of Endocrine Glands	3 (2-2)
V.An-705	Surgical Anatomy	3 (1-4)
V.An-706	Neuro Anatomy	4 (2-4)
V.An-707	Mammalian Embryology	3 (2-2)
V.An-708	Anatomy of the Reproductive System	3 (2-2)
V.An-709	Experimental Embryology	3 (0-6)
V.An-710	Techniques in Electron Microscopy	3 (1-4)
V.An-711	Biological Ultrastructure	3 (2-2)
V.An-719	Special Problem	1 (1-0)

V.An-720	Seminar	1 (1-0)
Animal Reproduction		
AR-701	Reproduction of Farm Animals	4 (3-2)
AR-702	Artificial Insemination	4 (3-2)
AR-703	Comparative Reproduction	4 (3-2)
AR-704	Biochemical Aspects of Semen	4 (3-2)
AR-705	Semen Preservation Techniques	4 (2-4)
AR-706	Advanced Obstetrics	4 (3-2)
AR-707	Infertility and Genital Diseases	4 (3-2)
AR-708	Equine Reproduction	4 (3-2)
AR-709	Canine Reproduction	4 (3-2)
AR-710	Embryo Transfer in Farm Animals	4 (1-6)
AR-719	Special Problem	1 (1-0)
AR-720	Seminar	1 (1-0)
Veterinary Clinical Medicine and Surgery		
VSg-701	Advanced Small Animal Surgery	4 (2-4)
VSg-702	Advanced Orthopedic Surgery	4 (2-4)
VSg-703	Advanced Large Animal Surgery	4 (2-4)
VSg-704	Advanced Surgical Techniques	3 (2-2)
VSg-705	Clinical Laboratory Aids in Diagnosis	4 (2-4)
VSg-706	Advanced Radiology	4 (2-4)
VSg-707	Entomological Diseases of Animals	3 (2-2)
VSg-708	Diseases of Laboratory Animals	3 (2-2)
VSg-709	Diseases of Zoo Animals	3 (2-2)
VSg-710	Diseases of Fish	4 (3-2)
VSg-719	Special Problem	1 (1-0)
VSg-720	Seminar	1 (1-0)
Veterinary Parasitology		
V.Par-701	Advanced Parasitology (General)	4 (3-2)
V.Par-702	Advanced Protozoology	4 (3-2)
V.Par-703	Medical Entomology	4 (3-2)
V.Par-704	Techniques in Parasitology	4 (2-4)
V.Par-705	Wild Life Parasitology	3 (1-4)
V.Par-706	Chemotherapy of Parasitic Diseases	4 (3-2)
V.Par-707	Physiology of Endoparasites	4 (3-2)
V.Par-708	Immunology of Parasitic Infestation	4 (3-2)
V.Par-709	Ecology of Animal Parasites	3 (3-0)
V.Par-710	Medical Protozoology and Helminthology	4 (3-2)
V.Par-711	Advanced Helminthology	4 (3-2)
V.Par-712	Diagnostic Parasitology	4 (2-4)
V.Par-719	Special Problem	1 (1-0)
V.Par-720	Seminar	1 (1-0)
Veterinary Microbiology		
VMb-701	Advanced Microbiology (General)	3 (2-2)
VMb-702	Immunology	3 (2-2)
VMb-703	Advanced Veterinary Bacteriology	4 (1-6)
VMb-704	Advanced Vitology	4 (3-2)
VMb-705	Mycology	3 (1-4)
VMb-706	Microbial Physiology	4 (3-2)
VMb-707	Tissue Culture Techniques in Virus Research	3 (2-2)
VMb-708	Oncogenic Viruses	3 (2-2)

VMb-709	Molecular Biology of Bacterial Viruses	3 (2-2)
VMb-710	Advanced Anaerobiology	3 (1-4)
VMb-711	Advanced Spirochaetology	3 (2-2)
VMb-712	Microbiological Techniques	3 (1-4)
VMb-718	Postgraduate Refresher Course in Bacteriology, Virology, Immunology and Epizootiology	3 (2-2)
VMb-719	Special Problem	1 (1-0)
VMb-720	Seminar	1 (1-0)
Veterinary Pharmacology		
V.Pm-701	General Pharmacology	3 (2-2)
V.Pm-702	Advanced Pharmacology I	4 (3-2)
V.Pm-703	Advanced Pharmacology II	3 (2-2)
V.Pm-704	Pharmacokinetics	4 (2-4)
V.Pm-705	Pharmaceutics	3 (2-2)
V.Pm-706	Neuropharmacology I	3 (2-2)
V.Pm-707	Pharmacology of Autonomic Nervous System	3 (2-2)
V.Pm-708	General Therapy	3 (2-2)
V.Pm-709	Pharmacotherapy	4 (3-2)
V.Pm-710	Chemotherapy	3 (2-2)
V.Pm-711	General Toxicology	4 (3-2)
V.Pm-712	Systemic Toxicology	3 (3-0)
V.Pm-713	Biochemical Pharmacology	3 (2-2)
V.Pm-714	Pharmacology of Autacoids	3 (2-2)
V.Pm-719	Special Problem	1 (1-0)
V.Pm-720	Seminar	1 (1-0)
Veterinary Physiology		
V.Phys-701	General Principles of Physiology	4 (4-0)
V.Phys-702	Physiology of Respiratory and Cardiovascular System	3 (2-2)
V.Phys-703	Physiology of Nerve and Muscle	3 (2-2)
V.Phys-704	Physiology of Digestion and Metabolism	4 (4-0)
V.Phys-705	Endocrinology	3 (2-2)
V.Phys-706	Physiology and Biochemistry of Rumen	4 (3-2)
V.Phys-707	Physiology of Steroid Hormones	3 (2-2)
V.Phys-708	Cell Physiology	4 (4-0)
V.Phys-709	Physiological Techniques	3 (0-6)
V.Phys-710	Enzymology	3 (3-0)
V.Phys-711	Physiology of Kidney and Sweat Glands	4 (3-2)
V.Phys-719	Special Problem	1 (1-0)
V.Phys-720	Seminar	1 (1-0)
Veterinary Pathology		
V.Pt-701	Advanced General Pathology	4 (3-2)
V.Pt-702	Advanced Clinical Pathology	4 (1-6)
V.Pt-703	Necropsy Practice	3 (0-6)
V.Pt-704	Advanced Diagnostic pathology	4 (0-8)
V.Pt-705	Oncology	3 (2-2)
V.Pt-706	Advanced Poultry Pathology-I	4 (2-4)
V.Pt-707	Immuno-Pathology	3 (2-2)
V.Pt-708	Advanced Systemic Pathology I	4 (2-4)
V.Pt-709	Advanced Systemic Pathology II	4 (2-4)
V.Pt-710	Reproductive and Neuroendocrine Pathology	4 (2-4)
V.Pt-711	Pathology of Diseases of Ruminants	4 (3-2)
V.Pt-712	Pathology of Diseases of Camel	3 (2-2)

V.PI-713	Advanced Poultry Pathology-II	3 (2-2)
V.PI-714	Pathology of Fish	3 (2-2)
V.PI-719	Special Problem	1 (1-0)
V.PI-720	Seminar	1 (1-0)
INST-701	Instrumentation and Analytical Techniques (for C.V.S. Lahore)	2 (1-2)

F - FACULTY OF SCIENCES

Bio-Chemistry		
Biochem-701	Introduction to Biochemistry	3 (3-0)
Biochem-702	Chemistry of Proteins	3 (3-0)
Biochem-703	Chemistry of Carbohydrates and Lipids	3 (3-0)
Biochem-704	Intermediary Metabolism of Carbohydrates and Proteins	3 (3-0)
Biochem-705	Intermediary Metabolism of Lipids and Nucleotides and Degradation	2 (2-0)
Biochem-706	Plant Biochemistry	3 (3-0)
Biochem-707	Applied Biochemistry	3 (3-0)
Biochem-708	Biochemical Analysis	2 (0-4)
Biochem-709	Biochemical Techniques	3 (0-6)
Biochem-710	Enzyme Studies	3 (3-0)
Biochem-711	Enzyme Kinetics	2 (2-0)
Biochem-712	Water and Mineral Metabolism	3 (3-0)
Biochem-713	Biological Oxidation Reduction	2 (2-0)
Biochem-714	Biochemistry of Vitamins	2 (2-0)
Biochem-715	Enzyme: Purification and Applications	4 (2-4)
Biochem-716	Biochemical Regulations	2 (2-0)
Biochem-717	Molecular Biochemistry	2 (2-0)
Biochem-718	Blood and Immuno Chemistry	2 (2-0)
Biochem-719	Special Problem	1 (1-0)
Biochem-720	Seminar	1 (1-0)
Biochem-721	Advanced Biochemical Techniques	3 (0-6)
Biochem-722	Recent Advances in Biochemistry	2 (2-0)
Biochem-723	Biochemistry of Pesticides	3 (3-0)
Biochem-725	Medical Biochemistry	3 (3-0)
Botany		
Bot-701	Plant Microtechnique	3 (2-2)
Bot-702	General Cytology	3 (2-2)
Bot-703	Biosystematics and Speciation	2 (2-0)
Bot-704	Plant Ecology	3 (2-2)
Bot-705	Agrostology	3 (2-2)
Bot-706A	Cell Structure and Function I	3 (2-2)
Bot-706B	Cell Structure and Function II	3 (2-2)
Bot-707	Water Relations of Plants	3 (2-2)
Bot-708	Photosynthesis	3 (2-2)
Bot-709	Respiration	3 (2-2)
Bot-710	Plant Photoperiodism	3 (2-2)
Bot-711	Phytohormones	3 (2-2)
Bot-712	Plant Metabolism	3 (2-2)
Bot-713	Radiation and Molecular Biology	3 (2-2)
Bot-714	Physiological Plant Anatomy	3 (2-2)
Bot-715	Plant Morphogenesis	3 (2-2)
Bot-716	Phylogeography	2 (2-0)
Bot-717	Advanced Systematics	3 (2-2)

Bot-718	Comparative Morphology of Vascular Plants	3 (2-2)
Bot-719	Special Problem	1 (1-0)
Bot-720	Seminar	1 (1-0)
Bot-721	Comparative Morphology of Non-Vascular Plants	3 (2-2)
Bot-722	General and Experimental Anatomy	3 (2-2)
Bot-723	Plant Embryology	3 (2-2)
Bot-724	Paleobotany	3 (2-2)
Bot-725	Germplasm Resources in Plants	3 (2-2)
Bot-726	Plant Exploration and Conservation	3 (2-2)
Chemistry		
Chem-701	Physical Chemistry I	3 (3-0)
Chem-702	Physical Chemistry II	3 (3-0)
Chem-703	Experiments in Physical Chemistry	2 (0-4)
Chem-704	Inorganic Chemistry I	3 (3-0)
Chem-705	Inorganic Chemistry II	2 (2-0)
Chem-706	Inorganic Analysis	2 (0-4)
Chem-707	Organic Chemistry I	3 (3-0)
Chem-708	Organic Chemistry II	2 (2-0)
Chem-709	Organic Analysis	2 (0-4)
Chem-710	Industrial/Applied Chemistry I	3 (3-0)
Chem-711	Industrial/Applied Chemistry II	2 (2-0)
Chem-712	Industrial Techniques	2 (0-4)
Chem-713	Advanced Physical Chemistry I	2 (2-0)
Chem-714	Advanced Physical Chemistry II	2 (2-0)
Chem-715	Modern Techniques in Physical Chemistry	2 (0-4)
Chem-716	Advanced Inorganic Chemistry I	2 (2-0)
Chem-717	Advanced Inorganic Chemistry II	2 (2-0)
Chem-718	Advanced Techniques in Inorganic Chemistry	2 (0-4)
Chem-719	Special Problem	1 (1-0)
Chem-720	Seminar	1 (1-0)
Chem-721	Advanced Organic Chemistry I	3 (3-0)
Chem-722	Advanced Organic Chemistry II	2 (2-0)
Chem-723	Synthetic Organic Process	2 (0-4)
Chem-724	Industrial/Applied Chemistry III	2 (2-0)
Chem-725	Industrial/Applied Chemistry IV	2 (2-0)
Chem-726	Analysis of Industrial Products	2 (0-4)
Chem-727	Chemistry of Natural Products	2 (2-0)
Chem-728	Molecular Spectroscopy	3 (3-0)
Chem-729	Chromatography	3 (3-0)
Chem-730	Cycloaddition Reactions	3 (3-0)
Chem-731	Chemistry of Electron Deficient Species	2 (2-0)
Chem-732	Chemistry of Nitrogen Compounds	3 (3-0)
Chem-733	Pharmaceutical Chemistry	3 (3-0)
Chem-734	Chemistry of Steroids	3 (3-0)
Chem-735	Chemistry of Halonium Ions	3 (3-0)
Chem-736	Chemistry of Organic Polyvalent Iodine Compounds	2 (2-0)
Chem-737	Synthetic Polymers	3 (3-0)
Computer Science		
CS-701	Introduction to Electronic Data Processing	3 (2-2)
CS-702	Computer Programming-I (BASIC)	3 (2-2)
CS-703	Computer Programming-II (FORTRAN)	3 (2-2)
CS-704	Computer Programming-III (COBOL)	3 (2-2)

CS-705	Computer Programming-IV (PASCAL)	3 (2-2)
CS-706	Computer Programming-V (C)	3 (2-2)
CS-707	Data Structures	3 (2-2)
CS-708	Introduction to Pre-packed Software	3 (2-2)
CS-709	Systems Analysis and Design	3 (2-2)
CS-710	Introduction to Assembly Language Programming	3 (2-2)
CS-711	Operating Systems	3 (2-2)
CS-712	Theory of Automate and Computation	3 (3-0)
CS-713	Compiler Theory	3 (3-0)
CS-714	Artificial Intelligence	3 (2-2)
CS-715	Software Applications-I	3 (2-2)
CS-716	Software Applications-II (AUTOCAD)	3 (2-2)
CS-719	Special Problem	1 (1-0)
CS-720	Seminar	1 (1-0)
Mathematics		
Math-700	Deficiency Course for Postgraduate Students	4 (4-0)
Math-701	Theory of Matrices and Numerical Analysis	3 (3-0)
Math-702	Advanced Calculus I	3 (3-0)
Math-703	Advanced Calculus II	2 (2-0)
Math-704	Mathematics for Economists I	2 (2-0)
Math-705	Mathematics for Economists II	2 (2-0)
Math-706	Mathematical Economics and Econometrics	4 (4-0)
Math-707	Computer Programming	3 (2-2)
Math-708	Operations Research	3 (3-0)
Math-709	Advanced Maths. for Soil Science	3 (3-0)
Math-710	Mathematics for Chemistry and Bio-Chemistry	2 (2-0)
Math-711	Econometrics I	2 (2-0)
Math-712	Econometrics II	2 (2-0)
Math-713	Mathematical Statistics	3 (3-0)
Math-714	Mathematical Genetics	2 (2-0)
Math-715	Methods of Mathematical Physics I	3 (3-0)
Math-716	Methods of Mathematical Physics II	3 (3-0)
Math-717	Operations Research and Game Theory	4 (4-0)
Math-718	Mathematical Analysis	4 (4-0)
Math-719	Special Problem	1 (1-0)
Math-720	Seminar	1 (1-0)
Math-721	Linear Algebra	4 (4-0)
Physics		
PY-701 Math-715	Methods of Mathematical Physics I	3 (3-0)
PY-702 Math-716	Methods of Mathematical Physics II	3 (3-0)
PY-703 Math-717	Quantum Mechanics I	3 (3-0)
PY-704 Math-718	Quantum Mechanics II	3 (3-0)
PY-705	Electrostatics and Special Theory of Relativity	3 (3-0)
PY-706	Electricity and Magnetism	3 (3-0)
PY-707	Laboratory Course I	3 (0-6)
PY-708	Laboratory Course II	3 (0-6)
PY-709	Thermal Physics and Statistical Mechanics	3 (3-0)
PY-710	Atomic Physics and Spectroscopy	3 (3-0)
PY-711	Nuclear Physics	3 (3-0)
PY-712	Electronics	3 (3-0)

PY-713	Solid State Physics	3 (3-0)
PY-714	Laboratory Course III	3 (0-6)
PY-715	Laboratory Course IV	3 (0-6)
PY-719	Special Problem	1 (1-0)
PY-720	Seminar	1 (1-0)
PY-721	Advanced Electronics and Instrumentation	3 (2-2)
PY-722	Advanced Solid State Physics I	3 (3-0)
PY-723	Advanced Solid State Physics II	3 (3-0)
PY-724	Ion Physics	3 (3-0)
PY-725	Agricultural Meteorology	3 (2-2)
PY-726	Soil Physics	3 (2-2)
PY-727	Radiations	3 (2-2)
PY-728	Classical Mechanics	3 (3-0)
Agri/Meteorology		
Agromet-701	Advanced Programming in Basic Meteorology	3 (2-2)
Agromet-702	Agrometeorology	4 (3-2)
Agromet-703	Developments of Models in Agri. Meteorology	3 (3-0)
Agromet-704	Instrumentation	3 (2-2)
Agromet-705	Applied Computer Techniques	3 (2-2)
Statistics		
Stat-700	Elements of Statistics and Biometry	4 (4-0)
Stat-701	Experimental Statistics	3 (3-0)
Stat-702	General Statistics	2 (2-0)
Stat-703	Non-parametric Statistics	2 (2-0)
Stat-704	Probability and Distribution Theory I	3 (3-0)
Stat-705	Probability and Distribution Theory II	3 (3-0)
Stat-706	Estimation and Testing of Hypotheses	3 (3-0)
Stat-707	Statistical Methods	4 (4-0)
Stat-708	Multivariate Methods	3 (3-0)
Stat-709	Experimental Design I	3 (3-0)
Stat-710	Experimental Design II	3 (3-0)
Stat-711	Experimental Design III	2 (2-0)
Stat-712	Sample Surveys I	3 (3-0)
Stat-713	Sample Surveys II	3 (3-0)
Stat-714	General Statistical Concepts	2 (2-0)
Stat-715	Interval Estimates and Time Series	2 (2-0)
Stat-716	Quality Control	2 (2-0)
Stat-717	Biological Assays	2 (2-0)
Stat-718	Field Plot and Pen Technique	2 (2-0)
Stat-719	Special Problem	1 (1-0)
Stat-720	Seminar	1 (1-0)
Stat-721	Statistical Mechanics	2 (2-0)
Stat-722	Statistical Methods for Economists	3 (3-0)
Stat-723	Survey/Research Report	4 (0-8)
Stat-724	Experimental Designs	4 (4-0)
Stat-725	Sample Survey III	3 (3-0)
Stat-726	Sequential Analysis	4 (4-0)
Stat-727	Statistical Models	4 (4-0)
Stat-728	Multivariate Statistical Inference	4 (4-0)
Stat-729	Statistical Inference for Dependent Variables	4 (4-0)
Stat-730	Data Analysis I	2 (0-4)
Stat-731	Data Analysis II	2 (0-4)

Stat-732	Recent Developments in Statistics	2 (2-0)
Zoology and Fisheries		
Zool-701	Invertebrates	3 (2-2)
Zool-702	Chordates	3 (2-2)
Zool-703	Palaontology	2 (2-0)
Zool-704	Development Biology	2 (2-0)
Zool-705	Evolution and Taxonomy	3 (3-0)
Zool-706	Zoogeography	2 (2-0)
Zool-707	Economic Zoology	2 (2-0)
Zool-708	Ichthyology	3 (2-2)
Zool-709	Herpetology	2 (2-0)
Zool-710	Ornithology	3 (2-2)
Zool-711	Mammology	3 (2-2)
Zool-712	Animal Ecology	2 (2-0)
Zool-713	Physiology of Fishes	2 (2-0)
Zool-714	Ethology	2 (2-0)
Zool-715	Quantitative Zoology	2 (2-0)
Zool-716	Limnology I	3 (2-2)
Zool-717	Population Biology	2 (2-0)
Zool-718	Fisheries Management	2 (2-0)
Zool-719	Special Problem	1 (1-0)
Zool-720	Seminar	1 (1-0)
Zool-721	Fish Culture	2 (2-0)
Zool-722	Fish Ecology	2 (2-0)
Zool-723	Zoological Microtechniques	2 (0-4)
Zool-724	Biology and Control of Vertebrate Pests	3 (2-2)
Zool-725	Limnology II	3 (2-2)
Zool-726	Fish Taxonomy	3 (2-2)
Zool-727	Techniques in Fisheries Research	3 (2-2)
Zool-728	Advances in Aquaculture I	3 (3-0)
Zool-729	Advances in Aquaculture II	3 (3-0)
Zool-730	Biological Basis of Freshwater Fish Production	3 (3-0)
Zool-731	Behavioural Ecology	2 (2-0)
Zool-732	Advanced Vertebrate Biology	3 (2-2)
Zool-733	Fish Requirements	3 (3-0)
Zool-734	Fish Feeding Management	3 (3-0)

G - DIVISION OF EDUCATION AND EXTENSION

Agri. Extension		
EX1.701	Extension Education Methods	3 (3-0)
EX1.702	Programme Planning in Agri. Extension	3 (3-0)
EX1.703	Supervised Field Studies	3 (1-4)
EX1.704	Evaluation in Agri. Extension	4 (3-2)
EX1.705	Communication in Agri. Extension	4 (3-2)
EX1.706	Audio-Visual Communication	4 (2-4)
EX1.707	Writing of Technical Reports and Scientific Articles	4 (3-2)
EX1.708	Agricultural Technology Transfer Systems	3 (3-0)
EX1.709	The Development and Supervision of Training Programmes	3 (3-0)
EX1.710	Community Development through Extension Education	3 (3-0)
EX1.711	Review of Farmers Education and Extension in Asia	3 (3-0)
EX1.712	Planning Adult Education Programmes	3 (3-0)

EXt.713	Farming Systems Research & Extension	3 (2-2)
EXt.714	Extension Administration & Management	4 (4-0)
EXt.715	Interviewing	3 (2-2)
EXt.719	Special Problem	1 (1-0)
EXt.720	Seminar	1 (1-0)

F - HOME ECONOMICS (FOOD & NUTRITION)

Major Courses		
HE-701	Food Commodities	3 (3-0)
HE-702	Practices of Human Nutrition	4 (4-0)
HE-703	Dietetics	3 (2-2)
HE-704	Protein in Human Nutrition	3 (3-0)
HE-705	Vitamins & Minerals in Human Nutrition	4 (4-0)
HE-706	Infant Feeding	3 (2-2)
HE-707	Human Nutritional Disorders	3 (3-0)
HE-708	Community Nutrition	4 (2-4)
HE-709	Laboratory Techniques in Nutrition	4 (0-8)
HE-710	Recent Advances in Human Nutrition	2 (2-0)
HE-711	Human Physiology	4 (3-2)
HE-719	Special Problem	1 (1-0)
HE-720	Seminar	1 (1-0)

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