6.4.5 Conduct of practical and hands-on-training at Dept. of Agril. Entomology

a. PG degree programme

Sr. No.	Course No.	Course Title	Skills learned through conduct of practical and hands-on-training
Department of Agronomy			
	AGRON 501	Modern concepts in crop production	1. To aquatint with modern concepts in crop production like crop growth analysis, 2. To know the ideotypes of different crops 3. Prepare crop modelling for desired crop yield
	AGRON 502	Principles and practices of soil fertility and nutrient management	1. Estimation of NPKS in crop plants 2. Determinations of NPK and organic carbon from soil 3. Estimation of electrical conductivity, soil pH, nutrients in FYM, Vermicompost
	AGRON 503	Principles and practices of weed managemt	1. To identification of weeds and their control 2. Handling of herbicides. 3. Spraying of herbicides and handling of different spraying equipments
	AGRON 504	Principles and practices of water management	1. Measurement of soil water potential by using tensio meter and pressure plate membrane apparatus 2. To measure the water flow by using different devices 3. Determination of irrigation requirement
	AGRON 507	Agronomy of oilseed, fibre and sugar crops	1. Planning and layout of field experiments 2. Practically seed treatment of oilseeds, fibre and sugar crops 3. Working out growth indices i,e. LER, CGR, RGR,NAR,LAD
	AGRON 512	Dryland farming and watershed management	1. Estimation of moisture and aridity idex 2. Spraying of antitranspirants 3. Collection and interpretation of data for water balance equations, 4. Determination of water use efficiency
	AGRON 513	Principles and practices of organic farming	1. Preparations of compost and vermicompost 2. Application of biofertilizers for their efficient use. 3. To acquaint with the procedure of certification, labelling and accreditation for farm produce organically

	AGROnN 591	Master Seminar	1. To develop the skill of scientific presentation 2. Collect the information on seminar topic, their arrangement and presentation.
	AGRON 599		1. To conduxt research on organic fariming, weed management, fertilizer management, crop geometry, Cropping systems etc.
Department of Agril. Botany			
1	GP-501	Principles of Genetics	1.Utilization of genetics principles like Mendels laws, population genetics during crop improvement
2	GP-502	Principles of Cytogenetic	1.Uilization of cytogenetic skills like chromosome manipulation during wide crossing progrnmme for crop improvement
3	GP-503	Principles of Plant Breeding	1.Utilization of plant breeding principles and methods for crop improvement.
4	GP-504	Principles of Quantitative Genetics	1. Application of quantitative genetics approaches for evaluation of breeding materials.
5	GP-508	Cell Biology and Molecular Genetics	1.To know the role of cell organelles and molecules in crop improvement
6	GP-510	Breeding for Biotic and Abiotic Stress Resistance	1.Utilization of principles and methods for improvement of stress tolerance in crop plants.
	SST-501	Floral Biology, Seed Development and Maturation	1.To know the flower biology and hybridization techniques for crop improvement.
	SST-502	Principles of Seed Production	1.To know the genetic purity of different crops 2.Seed production techniques of different crops 3. To know the different classes of seed
	GP-515	Maintenance Breeding, Concepts of Variety Release and Seed Production.	Concepts of quality seed production and maintenance of parental lines , procedure of varietal development and release
Department of Agril. Economics			
1	AG.ECON 501	Microeconomic Theory and Applications	1. To acquaint with theory of production and costs 2. To acquaint with consumer behaviour, demand and consumer surplus
2	AG.ECON 502	Macroeconomics and Policy	1. To acquaint with consumption function, market equilibrium 2. To acquaint with General equilibrium theory and macroeconomics
3	AG.ECON 503	Evolution of Economic thought	1. To acquaint with history of economic thought 2. To acquaint with economic thought of independent India

4	AG.ECON 504	Agricultural Production Economics	1. To acquaint with factors of Production and cost functions
5	AG.ECON 505	Agricultural Marketing and Price Analysis	1. To acquaint with problems of Agril. Marketing 2. To acquaint with market integration, market research and price policy
6	AG.ECON 506	Research Methodology for Social Sciences	1. To acquaint with types of research, research design. 2. To acquaint with project proposals
7	AG.ECON 507	Econometrics	1. To acquaint with linear models 2. To acquaint with problems and divisions of Econometrics
8	AG.ECON 508	Linear Programming	1. To acquaint with methods of LP 2. To acquaint with profit maximisation and cost minimisation
9	AG.ECON 509	Agricultural Finance and Project Management	1. To acquaint with financial institutions and credit flow to rural sector 2. To acquaint with credit proposals
10	AG.ECON 591	Master's Seminar	1. To acquaint with new and current topics in the field of Agricultural Economics
	AG.ECON 599	Master's Research	2. To conduct research on production, processing, marketing, banking etc
Department of Agril. Engg			
1	AG-ECON-517	Computer Applications to Agril. Economics	1. Skills in data analysis for research 2. Establishment of network
Department of Agril. Entomology			
1	ENT 501	Insect Morphology	1. To identify different morphological parts of insect
2	ENT 502	Insect Anatomy, Physiology and Nutrition	1. To dissect different systems of insect
3	ENT 507	Biological Control of Crop Pests and Weeds	1. To identify different natural enemies of insect-pests and weeds 2. To mass multiply natural enemies
4	ENT 510	Principles of Integrated Pest Management	1. To acquaint with concepts of Integrated Pest Management
5	ENT 511	Pests of Field Crops	1. To identify damage caused by pests infesting field crops 2. To manage pests infesting field crops
6	ENT 504	Classification of Insects	1. To identify different orders of insect on the basis of characters
	ENT 505	Insect Ecology	1. To acquaint with effect of biotic and abiotic factors on population dynamics and its use in insect-pest management
	ENT 508	Toxicology of Insecticides	1. To acquaint with bioassay techniques 2. To acquaint with concepts of toxicology

			3. To acquaint with residue analysis techniques 4. To acquaint with IRM techniques
	ENT 512	Pests of Horticultural and Plantation Crops	1. To identify damage caused by pests infesting horticultural crops 2. To manage pests infesting horticultural crops
	ENT 518	Techniques in Plant Protection	1. To acquaint with different plant protection equipments and their maintenance 2. To acquaint with safe handling of pesticides
	ENT 599	Master Research	1. To conduct research on bioassay, field-life tables, biology, IPM, insecticide resistance, sericulture, apiculture, etc
Department of AHDS			
1	AH-501	Livestock Production & Management	1. To acquaint the management practises of livestock 2. To develop sustainable livestock production 3. To maintain the animal at different climatic condition 4. To developed entrepreneurship through livestock farming
2	AH-502	Principles of Animal Breeding	1. To acquaint with different breeding policies 2. To improve the livestock through breeding strategies
3	AH-503	Principles of Animal Nutrition	1. To study the importance of nutrients in animal nutrition 2. To develop the balance ration for different animal 3. To study the digestion and absorption of different nutrients for different animals
4	AH-504	Animal Behaviour and Integrated Livestock Farming	1. To know the behaviour of different animals 2. To study the sexual behaviour of animals 3. To increase the livestock production through integrated livestock farming
5	AH-505	Physiology of Lactation	1. To study the mammary glands of different livestock 2. To know the role of hormones in mammary gland development and lactation
6	AH-506	Poultry Production	1. To study the importance of poultry production 2. To developed entrepreneurship through poultry farming
	AH-507	Ruminant Nutrition	1. To know the nutrients requirement for different physiological/categories of animals 2. To formulate the least cost ration for

			different categories of animals 3. To increase the production of animal by using different bypass nutrient technologies
	AH-508	Analytical techniques in Animal Nutrition	1. To evaluate the nutritive values of different feeds and fodder 2. To identify by the anti-nutritional factors present in feed and fodder
	AH-509	Sheep and Goat Production and Management	1. To know different breeds of sheep and goat 2. To acquaint the management practises of sheep and goat 3. To know the feeding practices of sheep and goat 4. To know the economics of sheep and goat farming 5. To developed entrepreneurship through sheep and goat farming
	AH-510	Population and Quantitative Genetics	1. To know the quantitative characters of farm animals 2. To improve the genetic potential of farm animal by appling laws of population genetics
	AH-591	Master Seminar	1. To develop the skill of presentation 2. To acquire the knowledge of emerging issues and techniques in livestock sector
	AH-599	Master Research	1. To conduct research on characterisation and conservation of local breeds, management practices adopted by different breeds, improvement of poultry production through feed supplements and hers, present status of local animal drought power and evaluation of draftability of local breeds
	DSC-501	Market Milk Process Technology	1. To study the dairy industry and its status 2. To study the market potential for milk and milk products 3. To study the procurement of milk
	DSC-502	Dairy Process and Product Technology	1. To learn the techniques of processing for preparation of different milk products 2. To know the scientific knowhow regarding processing of milk and milk products 3. To study the impact of processing on milk and milk products
	DSC-503	Traditional and Value Added Dairy Products	1. To know the indigenous method for milk product preparation 2. To improve the indigenous method of milk products preparation 3. To improve the traditional milk product through value addition e.g. functionality development
	DSC-504	Chemistry of Milk	1. To study different constituents of milk

		and Milk Products	2. To study the interaction effect of milk constituents during processing 3. To understand the different changes occurs in milk and milk products during processing 4. To develop the milk products by acquiring knowledge
	DSC-505	Physico-Chemical Aspects of Milk Constituents and Milk Products	1. To study detail physico-chemical properties of milk constituents of milk 2. To understand the physic-chemical changes occurs in milk and milk products during processing
	DSC-506	Microbiology of Milk and Milk Products	1. To study the different microbes present in milk and milk products 2. To study method of milk preservation 3. To study the use of microbes for the development of milk products
	DSC-507	Dairy Starter and Fermented Milks	1. To study the different starter used in dairy industry 2. To develop useful starter culture for fermented milk products
	DSC-508	Technology of Milk By-Products	1. To study the importance of milk by-products 2. To develop the techniques for utilization of milk by products 3. To minimise the milk production and processing cost by using milk by-products
	DSC-509	Packaging for Milk and Milk Products	1. To study the different packaging techniques and packaging material 2. To enhance the functionality and self life through packaging techniques
	DSC-510	Quality Control and Sensory Evaluation of Milk Products	1. To acquaint the different quality standards applicable for milk products 2. To prepared the milk products by adopting quality control measures for exporting indigenous milk products
	DSC-591	Master Seminar	3. To develop the skill of presentation 4. To acquire the knowledge of emerging issues and techniques in dairy sector
	DSC-599	Master Research	2. To conduct research on development of dairy foods, processing technology and application of developing science for the betterment of dairy sector
Department of Extension Education			
1	EXT 501	Development perspectives of extension Education	1. To visit ongoing Rural development programmes 2. To visit KVK To visit NGO
2	EXT 502	Development communication & information management	1. To identify the problems related communication 2. To prepare literature for mass media 3. To prepare news stories, articles

3	EXT 503	Diffusion and adoption of innovation	1. To prepare PPT 2. Identify adopter categories 3. To study the case studies in adoption process
4	EXT 504	Research methods in behavioural science	1. To select research problem 2. To identify the variables 3. To prepare interview schedule 4. To conduct survey for collection of data
5	EXT 505	E-Extension	1. To know ICT projects 2. To identify ICT tools 3. To handle ICT tools
6	EXT 506	Entrepreneurship development & management in extension	1. To conduct market survey 2. To study successful entrepreneur 3. To identify leader
7	EXT 507	Human resource development	1. To visit training organizations 2. To know training methods 3. To prepare reports
Department of Horticulture			
1	FSC-501	Tropical and Dry land Fruit Production	3. To develop skill horticultural practices followed in cultivation of tropical and dry land fruit crops
2	FSC-502	Sub-tropical and Temperate Fruit Production	1. To develop skill horticultural practices followed in cultivation of sub-tropical and temperate fruit crops production
3	FSC-503	Biodiversity and Conservation of Fruit Crops	1. To develop skill of conservation of biodiversity utilized for fruit crop improvement.
4	FSC-506	Breeding of Fruit Crops	1. To develop the skill of breeding of fruit crops.
5	FSC-507	Post Harvest Technology of Fruit Crops	1. To develop the skill of post harvest management in fruit crops.
	FSC-508	Growth and Development of Horticulture Crops	1. To understand different growth stages of plants and its importance in production. 2. To develop the skill of training and pruning of horticultural crops. 3. To develop the skills to improve the growth and quality of horticultural crops.
	FSC-510	Organic Horticulture	1. To develop the skills and knowledge to improve the production of horticultural crops by using organic inputs. 2. To understand the importance of organically grown crops. 3. To grow the crops free from chemicals and pesticides residues.
	FSC-591	Master's seminar	1. To develop the skill of scientific presentations. 2. To develop stage courage and the

			skill of disseminating technology.
	VSC-501	Production Technology of Cool Season Vegetable Crops	1. To develop the skill of production of cool season vegetable crops.
	VSC-502	Production Technology of Warm Season Vegetable Crops.	1. To develop the skill of production of warm season vegetable crops.
	VSC-503	Breeding of Vegetable Crops.	1. To develop the skill of breeding of vegetable crops.
	VSC-504	Growth and Development of Vegetable Crops.	1. To develop the skills and techniques of training and stacking of vegetable crops. 2. To develop the skills for improve the growth and quality of vegetable crops
	VSC-505	Seed production Technology of Vegetable Crops	1. To develop the skill and knowledge about seed production technology in vegetable crops.
	VSC-507	Production Technology of Underexploited Vegetable Crops	1. To develop the skill of production and marketing of underexploited vegetable crops. 2. To develop confidence in production of unexploited vegetables.
	VSC-509	Fundamentals of Processing of Vegetable	1. To learn the skill and techniques of processing in vegetable crops.
	VSC-508	Organic Vegetable Production Technology	1. To develop the skills to produce the vegetable crops by using organic inputs. 2. To understand the nutritative values and benefits of consuming organically grown vegetable crops. 3. To grow eco-friendly vegetable crops
	VSC-591	Master seminar	1. To develop the skill of scientific presentations. 2. To develop stage courage and the skill of disseminating technology.
Department of Plant Pathology			
1	PL.PATH 501	Mycology	1. To identify morphology of fungi
2	PL.PATH 502	Plant Virology	1. To acquaint with modes of transmission , purification and identification of viruses
3	PL.PATH 503	Plant Bacteriology	1. To acquaint with morphology, isolation, identification and staining techniques of bacteria.
4	PL.PATH 506	Principles of Plant Disease Management	1 To acquaint with different group of fungicides and *In- vitro* and *In-vivo* evaluation of fungicide 1. To acquaint with different plant protection equipments and their

			maintenance 2. To acquaint with safe handling of fungicides
5	PL.PATH 505	Techniques in Plant Pathology	1. To acquaint with different plant protection equipments and their maintenance 2. To acquaint with safe handling of pesticides 3. To identify different orders of insect on the basis of their characteristics.
	PL.PATH 599	Master Research	1. To conduct research on Isolation, Identification, Pathogenicity of different fungi, *In- vitro* and *In-vivo* evaluation of fungicide, bioagents , plant extract, Seed Pathology, Phytoplasma, Management of viruses.
Department of SSAC			
1	SOILS-501	Soil Physics	1. To analysis of physical properties of soil.
2	SOILS-503	Soil Chemistry	1. To analysis of chemical properties of soil.
3	SOILS-504	Soil Mineralogy, Genesis, Classification and Survey	1. To identify rocks and minerals 2. Soil Survey and land use planning 3. To preparation base map for soil survey 4. To preparation of soil map
4	BIOCHEM-501	Basic Biochemistry	
5	SOILS-510	Remote Sensing and GIS Techniques for Soil, Water and Crop Studies	3. Identification object by using satellite data 2 To preparation base map for soil survey by using satellite data 3 To preparation of soil map by using GIS
6	PGS-504	Basic Concepts in Laboratory Techniques	2. To familiar with high cost laboratory equipments with maintenance.
	SOILS-502	Soil Fertility and Fertilizer Use	
	SOILS-506	Soil Biology and Biochemistry	
	SOILS-509	Soil, Water and Air Pollution	
	SOILS-	Analytical Techniques and	1 To familiar with labortary equipments

	511	Instrumental Methods in Soil and Plant Analysis	2 To analysis of soil water and plant analysis
	SOILS-513	Management of Problem Soils and Waters	1 To understand the constrains and potential of soil and there management for rehabilitation
	SOILS-591	Seminar	1 To familiar with preparation PPT and presentation
	SOILS-599	Research	2 To familiar with conducting field research trial 3 To familiar with soil analysis 4 To familiar with soil survey and land use planing