1.1.1 Curricula developed and implemented have relevance to the local, national, regional and global development needs which is reflected in programme outcomes (POs) and course outcomes (Cos) of the programme by the university 18UGAGRGE

DEPARTMENT OF AGRICULTURE

2018 REGULATION

Local need	
Regional need	
National need	
Global need	



B.Sc. (HONS.) AGRICULTURE

2018 REGULATION

	Programme Outcome (POs)		
PO1	Recognized the importance of agriculture, providing food, fibre and income as well as nation building		
PO2	Understand the scientific method of cultivation of field cropsand horticultural crops along with animal production		
PO3	Establish agro-based start-up for the upliftment of rural community		
PO4	Initiate rural enterprises thereby providing jobs for the jobless		
PO5	Carryout basic and applied research geared towards augmentation of crop and animal production		
PO6	Transfer of agro technology to the farming community via public and private sector stakeholders		
PO7	Purse advanced courses and training in International and national institution		

COURSE OUTCOME (CO's)

B.Sc.(hons) agriculture

Semester	Course code	Course title	CO's
I	18 AGR 101	Fundamentals of Agronomy	• Students can learn about basic aspects of Agronomy from sowing up to harvest including various tools and implements used for field operations
			• Students aware about the irrigation principles, methods of irrigation and its application in field crops
			• Students can learn about the basics of weed management in field crops.
	18 AGR 102	Agricultural Heritage*	• The students have gained the basic knowledge about agricultural history of India.
			They have been familiarized with the indigenous knowledge and present scenario of Indian agriculture.
			• They learn to strengthen and conserve the sustainable use of bio diversity agricultural and rural development
			They study the ancient culture of agriculture and make it use in modern agriculture for sustainability.
	18 AGR 103	Introduction to Forestry	• Students can learn about the basic aspects of Forestry
			Students can understand the importance of forests and Agro forestry system
			• Students learn about techniques of tree planting and its management
			They learn about classification of forest in which they may know about the types of forest which is under humane intervention which in turn helps to know the facts to
	18 AEX 101	Rural Sociology & Educational Psychology	• The students can learn the Rural Social situation, their Structure and Function for effective Agricultural Extension.

		 The students may be motivated towards learning, personality and good behavior. The students will understand investigates the social, cultural, political and religious
18 AEX 102	Human Values & Ethics (non gradial)	The students will gain knowledge about the concept human values. They know about the basis interests
		choices, needs, desires and preferences of human. • They also know about positive human
		behavior and actions of humane daily lives.
18 GPB 101	Introductory Biology	• The students will know about botanical features and economic importance of different field and horticulture crops.
		• The students will also know about the basics of biology in relation with agriculture.
18 HOR 101	Fundamentals of Horticultre	• After completion of this course, the students will acquire basic knowledge about the fundamental aspects of horticulture.
		The students learn about the sexual and asexual Propagation techniques.
		The students in turn will find it easier to undergo other horticultural courses in the following semesters.
		• Students will realize the importance of Horticulture and its impact in the human health, economic development of farmers and National
18 SAC 101	Fundamentals of Soil Science	• Understanding the Soil forming rocks and minerals, soil forming processes.
		• Studying the physical and chemical properties of soils
		 Studying about soil organic matter, soil pollution and mitigation. The course will provide the over view of
		fundamental concepts in soil science genesis, classification and morphology, soil physics, soil
18 BIC 101	Fundamentals of Plant	chemistry, fertility and land use pattern.
10 DIC 101	Biochemistry and Biotechnology	of plant biochemistry and briefly learn about biological techniques.
		• The students will get the knowledge about the classification and nomenclatures of
		plant growth and easily understand techniques
1		acout the oro teenhorosy.

	18 ENG 101	Comprehension & Communication Skills in	 The students will increase awareness about the concept of applications of plant biotechnology. On completion of the course, students are able to understand the basic component or bio molecules of plant substances. The students are well equipped on Communication skills and handling of
		English	interviews. • The students also know about grammatical knowledge
	18 NSS / NCC 101	NSS/NCC/Physical Education & Yoga Practices	Students will come to know basic knowledge on NSS,NCC programs, They also know about youth development
			 Student gain knowledge on yoga, health, hygiene and sanitation
Π	18 AGR 104	Introductory Agro-meteorology & Climate Change	 The students will get acquainted with recent development in agro –meteorology with historical development of climate change. The students will study the important characterization of agricultural climate change. They study crop planning for prevailing climate for sustainable agriculture They study about crop management to various climate change and ways to mitigate it.
			• They study about various instruments used in agro- meteorology.
	18 AEC 101	Fundamentals of Agricultural Economics	The students have been educated towards the principles, laws, production and macroeconomic concepts.
			 The students will gain the knowledge on basic principles of economics including the problem of economic decision-making. Students will know about laws of
	18 AEN 101	Fundamentals of Entomology	Know about arthropods and especially insects with their morphological features
			 Identify insects of economic importance and acquire working skills for collecting, mounting, and preserving insects Know about pesticide classification and their formulations and maintenance of pesticide appliances

18 AE	X 103 Fundamental Extension Ed	s of Agricultural lucation	 The students will gain the knowledge on basic principles of economics including the problem of economic decision-making, laws of economics and macroeconomic concepts. The students will gain knowledge about various schemes, community development programmes, and rural development projects. The students know about leadership and efficiency They gain knowledge to provide appropriate solution of the farmer's problems.
18 AG	M 101 Agricultural	Microbiology	 Gain hands on skill development in safe handling, culturing and staining of microorganisms. Get an complete understanding on historical events, diversity and scope of microbes
			Understanding the structural characters, cell growth, recombination techniques and metabolic features of microorganisms Gather theoretical background of microbes in soil fertility, crop production, biofertilizers, biopesticides and biofuel production
			Finally students will able to perform various aseptic techniques ; gain instrumentation and equipment based knowledge
18 GP	3 102 Fundamental	s of Genetics	 Basic principles of inheritance and modern concepts of genetics will be exposed to student The students know about genetics principles and their application, ultra structure of cell and cell organollas
18 CR	P 101 Fundamental Physiology	s of Crop	The students will learn about the basic concepts and application of crop physiology.
18 PA7	101 Fundamental Pathology	s of Plant	Understanding the Development and History of plant pathologyUnderstanding Terms, Concepts and Classification of plant DiseasesLearning about the pathogens, plant pathology history & their impacts in the environmentUnderstanding the important disease causing agents and their basic symptoms
18 SW	E 101 Soil and Wate Engineering	er Conservation	The students can learn different types of erosion due to water and wind.

			• The students can learn different types of gully control structures and its suitability
			The students can learn to estimate soil loss by using USLE.
			• The students can learn the control methods of soil erosion.
ш	18 AGR 201	Crop Production Technology - I (Kharif Crops)	• Students can learn about the Crop classification and cultivation practices of various crops grown under kharif season
			 Students can gain practical knowledge on raising of nursery and recording bio- metric observation and working of cost of cultivation for various crops Students learn to identify the development and application of advances in sciences which leads to the production of healthy food. To develop cropping system for food and value added products which are compatable with environment and application of advancement in science and technology leading to improved production of safe and nutritious food
	18 AGR 202	Education of Tour	The students aware and enriched with the details on latest varieties, technologies practiced in various field crops and horticultural crops in different zones of Tamil Nadu in South part of India. They will expose themselves into many question and answer session in research stations through which they can mould themselves for their better subject knowledge.
	18 AEC 201	Agricultural Finance and Co- operation	 Students learn about agriculture finance, credits and cooperatives. They learn about cooperation, entrepreneurship development. The students will gain the knowledge on principles of finance, Banking and Cooperation, and farm financial analyses.
	18 AMP 201	Livestock and Poultry Management	The students have learned about basic knowledge on how to manage and operate livestock and poultry farms

1	8 ENS 201	Environmental Studies and Disaster Management	The students will get acquainted on selection and breeding of livestock and their management aspects The students will gain knowledge and skills required to run broiler and layer chicken farm successfully Students learn about ecosystems, pollution and other problems related to
			 Students learn about types of disasters and its management The students will gain the knowledge of the ecosystems, Food chains, food webs and ecological pyramids. The students learn the classification, biological function of natural resources.
1	8 FMP 201	Farm Machinery and Power	 The students can get practical knowledge in operation and maintenance of tractor, power tillage, sprayer, reaper and multi crop thresher. The students can learn in selection of suitable farm equipment for tillage to harvest based on field and crop conditions. The students can able to estimate the cost of farm equipment operation, coverage and power requirements Students will be equipped with sufficient theoretical knowledge with practical skills on farm power sources, the availability of tractors and handling of tractors, power tillers and various implement used in land preparation, sowing, inter cultivation, plant protection and harvesting operations.
1	8 GPB 201	Fundamentals of Plant Breeding	The Students will gain Knowledge about the various techniques of quality seed production, processing and seed quality enhancement. The students learn about the plant breeding methodologies and application employed for self, cross and vegetatively propagated crops will be exposed
1	8 HOR 201	Production Technology for Vegetables and Spices	The students will learn about latest production technology of Major and minor fruit crops and plantation crops. The students will have a complete knowledge on the production technology of vegetables and spices crops at different locations.

	18 COM 201	Agro-Informatics	At the end of this course, the students will able to
			• Learn the basic concept of Computer and Internet
			Create document in MS Word
			• Do the Statistical Calculations and draw the chart using MS Excel
			Design Presentation using MS Powerpoint
			• Apply ICT for Agriculture activities
	18 MAT 201	Statistical Methods	Upon completion of the course, the students will be able to:
			• Be familiar with basic concepts and terms
			statistical measures
			Create and interpret visual representation of statistical data.
			• Make valid decisions applying statistical methods.
	18 AGR 203	Farming System & Sustainable Agriculture	• Students learn about the connection between agriculture, farming system and cropping systems.
			Students know about the sustainable ways to produce crops and its management.
IV	18 AGR 204	Crop Production Technology - II (Rabi Crops)	• Students can learn about the Crop classification and cultivation practices of various crops grown under rabi season
			Students can gain practical knowledge on cultivation and preservation of fodder including recording bio-metric observation and working
			Students learn to identify the development and application of advances in sciences which leads to the production of healthy food.
	18 AGR 205	Irrigation Water Management	Students identified the ways to determine the need for irrigation.
			They learn about irrigation concepts like Irrigation scheduling, water use efficiency, crop water requirement etc
			• They learn the importance of water management in agriculture which leads to better development of agricultural sustainability.

18 AEC 202	Agricultural Marketing Trade & Prices	The students have been equipped with better marketing strategies and to handle it in a better way.
		• They know better about marketing functions and trade concepts.
		The students will gain the knowledge of market concepts marketing of agricultural commodities, intermediaries involved, domestic and export trade, risk in agricultural marketing.
18 AEX 201	Communication Skills and Personality Development	• The students will be familiarized with various communication skills.
		• They will develop as a better professionals with inter personal skills.
		• They will develop problem solving skills and their influence on behaviour and will emerge as a better personalities.
		The students will gain knowledge about note taking, writing skills, oral presentation skills; field diary and lab record; indexing, footnote and bibliographic procedures.
		The students also know about reading and comprehension of general and technical articles, precise writing, summarizing, abstracting; individual and group presentations
18 ERG 211	Renewable Energy and Green Technology	The students will understand the renewable sources like solar energy, wind energy and biochemical energy
		 Students gain practical knowledge about solar PV system, solar cooker, solar water heater and solar dryer
		Students know the construction of biogas plant and their performance evaluation
18 HOR 202	Production Technology for Fruit and Plantation Crops	The students will learn about latest production technology of Major and minor fruit crops.
		• The students will learn about latest production technology for plantation crops.
18 PAT 201	Principles of Integrated Pest and Disease Management	• Students will be able to comprehend the principles underlying integrated Pest and disease management.
		• The students understand concept of ETL and EIL
		• Students acquire knowledge about the plant and host relationship and their management
		• They get knowledge about the integrated management of plant diseases and pest.

	18 SAC 201	Problematic Soils and their Management	• Studying about soil quality, soil physical and chemical constraints, wastelands and land use classification.
			• Studying irrigation water quality.
			sensing and GIS in problem soil management
			• Studying the type of problematic soils and their management practices, soil water quality parameters, application of remote sensing technology in agriculture and to mitigate pollutions.
	18 SST 201	Principles of Seed Technology	• The Students will gain Knowledge about the various techniques of quality seed production.
			The student also know about processing and seed quality enhancement.
V	18 GPB 301	Crop Improvement - I (Kharif Crops)	 The student will learn about basic concepts of classical, wild species methodologies employed for Kharif crops and current trends in plant breeding will be exposed. The students will gain knowledge on floral biology of different field crops and their crossing hybridization techniques
	18 AGR 301	Rainfed Agriculture & Watershed Management	 Students learn to motivate the farmers for the adaption of improved agricultural practices for enhancement of crop production Students also learn about the productivity under rainfed areas They learn to adapt new irrigation
			systems by using less water under adverse climatic conditions.
	18 AGR 302	Practical Crop Production - I (Kharif Crops)	 Students can learn about cultivation of crops in the field with practical exposure Students can gain knowledge on working out cost of cultivation and BCR
			• Learning all farm activities field management and to gain maximum knowledge about crops of a particular season
	18 AEN 301	Pests of Crops and Stored Grain and their Management - I	Identifying the major pests and their symptoms, biology and host range of Field and Horticulture Crops
			Understanding important management practices of insect pest and non insect pests

		• Students learn about the nature of
18 AEX 301	Entrepreneurship Development and Business Communication	 The students will be familiarized with Entrepreneurship, Agri-premiership, Organizational Skills and Supply Chain Management. The students gain knowledge in Project Formulation, Project report preparation, Evaluation and Process of Supply Chain Management. The students will gain knowledge about analyze the selected enterprises in terms of their management process and functions through study visits develop the skills of an effective manager through simulated exercises on communication skills.
18 HOR 301	Production Technology for Ornamental Crops, MAP and Landscaping	 The students will be familiarized on Production technology and comprehensive knowledge on cut and loose flowers, Medicinal and Aromatic crops respectively The students will be equipped with basic concepts of Landscape design The students will be able to undertake commercial cultivation of flower crop, medicinal and aromatic plants. Students will gain knowledge to establish different types garden in various locations.
18 PAT 302	Diseases of Field and Horticultural Crops and their Management - I	 Understanding the basic symptoms of diseases cereal, Millets, Oil seeds, Pulses and cash crops Understanding the basic symptoms of diseases Fruits and vegetable crops
18 SAC 301	Manures, Fertilizers and Soil Fertility Management	 Studying about organic manures and preparation techniques of organic manures Studying the types of chemical Fertilizers Studying about soil fertility and plant nutrition, nutrient transformation and fertility evaluation. The students acquire knowledge on the aspects of soil fertility management and to diagnose tailor made fertilizer recommendations for crops.
18 IPR 301	Intellectual Property Rights	• To learn about the intellectual property rights, patents, legislation and Acts

			 The students gain the knowledge about GATT, WTO, TRIPs and WIPO; Treaties for IPR protection: Madrid protocol, Berne Convention, Budapest treaty, etc.; The student will learn the types of Intellectual Property and legislations covering IPR in India: Patents, Copyrights, Trademark, Industrial design, Geographical indications, Integrated circuits, Trade secrets.
			• The students will gain the knowledge of the Patent system in India, patentability, process and product patent, filing of patent, patent specification, patent claims, Patent opposition and revocation, infringement, Compulsory licensing, Patent Cooperation Treaty, Patent search and patent database.
VI	18 AGR 303	Geoinformatics and Nano- technology and Precision Farming	Introducing precision agriculture to the students, geo-informatics and geospatial technologies as a modern tool for precision agriculture and crop growth improvement in agriculture
			Studying the concepts and applications of remote sensing and image processing in agriculture
			• Understanding the concepts of nanotechnology
			• Students know about the economic and environmental feasibility of the precision farming technology.
	18 GPB 302	Crop Improvement - II (Rabi Crops)	 The student will learn about basic concepts of classical, wild species methodologies employed for rabi crops and current trends in plant breeding will be exposed. The students will gain knowledge on origin, floral biology.
			• Students acquire knowledge in emasculation and crossing techniques of different field crops and horticulture crop.
	18 AGR 304	Practical Crop Production - II (Rabi Crops)	Each student will be allotted a small crop cafeteria and he / she will do all field operations in the allotted land from field preparation to harvest and processing.

		 To gain better knowledge about rabicrops. Learning all farm activities field management and to gain maximum knowledge about crops of a particular season
18 AGR 305	Principles of Organic Farming	• The Students understand the importance, Basic concept Principles of organic farming,
		• The Students learn about the benefits of Organic Farming Certification process, agencies and Future possibilities of Organic farming.
		Students learn about promoting the usage of natural products Students learn to use the natural farm
18 AEC 301	Farm Management, Production & Resource Economics	resources produced within the farm The students gained the knowledge about Farm Management and business analysis.
		• Students will be equipped with management concepts and management of common resources.
		• The students will gain the knowledge on principles of farm management.
18 AEN 302	Pest of Horticulture Crops and Management of Beneficial Insects	 The students gain knowledge on identifying the major pests and their symptoms, biology and host range of Horticulture Crops They also understand the important management practices of insect pest and non insect pests.
		The students also gain knowledge about beneficial insects and their usage. Students learn about the nature of
18 FSN 301	Principles of Food Science and Nutrition	damages caused by the insect pest. • The students have gained the knowledge about the Physical, chemical properties of foods and the role of Microbes in food processing and spoilage.
		 They have been familiarized with methods of food preservation and the fundamentals of human Nutrition. The students learn the definition, classification, biological function and chemical
		and physical properties of major and micro nutrients.

	18 HOR 302	Post-Harvest Management and Value Addition of Fruits and Vegetable	 The students will gain the knowledge of the fundamentals food microbiology and also learn the food safety and standards. The students will be acquired knowledge on various postharvest management technologies on fruits and vegetables such as Jam, Jelly Candy and Squash. Students are also gain knowledge on conventional and modern packaging methods. The students will have complete knowledge on the post harvest handling, processing and packing systems of fruits and vegetables
	18 PAT 302	Diseases of Field and Horticultural Crops and their Management - II	 Understanding the basic symptoms of diseases cereal, Millets, Oil seeds, Pulses and cash crops Understanding the basic symptoms of diseases Fruits and vegetable crops Understanding important disease management methods in Fruits and vegetable crops Acquiring knowledge about the pathogens and diseases in both field and horticultural crops
	18 PCA 301	Protected Cultivation and Secondary Agriculture	 The students can learn to design green house based on crop and environmental conditions. The students can learn to handle equipments used to measure parameters in green house. The students can learn Engineering properties of grains for designing post harvest equipments. The students can learn the operation and maintenance of dryers and materials handling equipments.
VII	18 AEX 401	Rural Agricultural Work Experience and Agro-industrial Attachment (RAWE & AIA)	The students identified the agricultural problems & farmers problem. Visit to various agricultural research centers, local institution, interaction with research scientist, conducting different type of experiment and demonstrations.
VIII	18 EXP 401	Production Technology for Bioagents and Biofertilizer	Gain experimental knowledge on Bioagents and biofertilizer production methodologies, formulations and application strategies

18 EXP 402		• At the end of this course students will themselves be a entrepreneur with the knowledge on starting biofertilizer unit and low low cost technologies in biofertilizer and Bioagents production • Students acquire skills on low cost media
		preparation and cultural practices in biopesticides and biofertilizer production • Students Understand the application strategies, quality control and marketing.
	Seed Production and Technology	• The students will gain knowledge about the various techniques of quality seed production.
		harvest operation, processing and seed quality enhancement
	Mushroom Cultivatiuon Technology	• Learning about the details of edible mushroom
		• Acquiring knowledge about the edible mushroom and their cultivation technology
		Acquired knowledge about the various disease and pests that affect mushroom during cultivation process To get knowledge about the management
		of the mushroom diseases and various cultivation techniques.
	Soil, Plant, Water and Seed Testing	The students learn about assessing the soil, plant, water and seed samples through various methods
		The student know about soil and water sample collection
		interpretation of analytical results of collected samples.
		• They acquire knowledge in issuing soil health cards
	Commercial Beekeeping	The students gain knowledge about species and communication in honey bees.
		• Students also know about mass rearing and production of honey bees.
		They also know about method of collection of bees wax, pollen and marketing of honey bee products.

Poultry Production Technology	 Students gain knowledge about poultry housing and feeding management. They also study about flock health, processing and marketing. Students acquire knowledge on various standards of brojlers and layers.
Commercial Horticulture	 The students who are undergoing this experiential learning will have independent skill to manage commercial nursery. They know to prepare a nursery and it will create a self enterprising activity for them.
Floriculture and Landscaping	 The students who are undergoing this experiential learning about identification and study important commercial varieties of the flowering crops. Preparation of ground and beds for planting specific flower crops. Students know about layout of plots and gardens, planning for home gardens, landscape gardens. Preparation and execution of landscape plants maintenance of gardens and lawns. They know about accessories and containers for flower arrangements.
	Students also know about floral arrangement preparation of floral ornaments bouquets etc. Preparation of bottle gardens, terrarium etc.
Food Processing	 The students learn about the importance of food processing Students gain knowledge on instruments and methods used to process food. They also know about the marketing and package of processed food.
Agriculture Waste Management	 The students will gain independent skill to manage large quantity of solid waste through composting technology. They know how to prepare a project on solid waste management and it will create a self enterprising activity for the students. They also know about assessing nutritive value of the compost and national & international standards for compost quality.
Organic Production Technology	The Students understand the Basic concept and Principles of organic farming

		The Students learn about the benefits of Organic Production Student also learn the importance of organic food production.
	Commercial Sericulture	The students acquire knowledge about mulberry production and management They also know about silkworm rearing
		and methods • Students acquire knowledge about mainfield preparation manuring, planting methods, training and pruning of mulberry upto harvest.

SEMESTE R	COURSE	COURSE TITLE	CO'S
•		A ani husingan	To accurred the learner with
	18 OP I	Agri business	• To acquired the learner with
		management	meaning and concepts of
			hanagement and organizational
			• Students get the concept processes.
			significance and role of
			management and organizational
			behavior
		Agro chemicals	• To familiarize the student about
			pesticide residual in water, soil and
			atmosphere and its impact on
			human life
			• Student will be aware pesticides in
			to the atmosphere and their fate.
		Commercial plant breeding	• To expose the student to basic and
			brooding
			• To import knowledge on breeding
			methods of self, cross and clonally
			propagated crops
		Landscaping	 Students will gain knowledge of
			landscape architecture design
			practices and processes, design
			terms and techniques through
			discussion and studio work
			• Develop understanding of form
			and its variety by creating models,
			doing sketches and drawing
		Each asfatu issues	completing design projects
		Food safety issues	 Identify the characteristics of potentially bezerdous food
			Identify the dangers of food horne
			illness
		Bio pesticides and bio fertilizers	
		F	Ability to understand formulation
			and large-scale industrial
			production of bio fertilizers.
			To gain knowledge eco friendly
			agricultural inputs so as to nullify
			the ill effects of fertilizer
		Protected cultivation	Student get knowledge about that crops
			are grown in an environment free from
			narmiuli external factor like pest, disease
			and extreme weather.

Micro propagation technologies	Student get ideas about plant production under various micro propagation Student will be able to describe the paint growth processes in the tissue culture environment
Hi- tech horticulture	Students will be able to learn to model and innovative technologies in horticulture field. To gain knowledge about preservation and value addition in fruit and vegetable
Weed management	The student able to identify the different habitat of weed The student get knowledge about the weed management practices
System simulation and agro advisory	ability to get knowledge use of crop simulation model for preparation of agro advisory students will be able to get knowledge about remote sensing and its application in agriculture, preparation of agro advisory bullet in based on weather forecast.
Agricultural journalism	Get an idea about journalism and specifically about farm journalism Follow certain guidelines in writing farm articles

SCHOOL OF AGRICULTURE

1.1.1

	Details of topic related to LRNG Developmental Needs						
S.	Programme	Course	Name of the	Local	Regional	National	Global Development
No	code	code	course				
1	18UGAGRGE	18 AGR	Fundamentals of	Unit I - Agronomy &	Unit I - Agronomy &	Unit I - Agronomy &	
		101	Agronomy	tillage effect Unit IV-	tillage effect Unit IV-	tillage effect Unit IV-	
				Cropping pattern	Cropping pattern	Cropping pattern	
2	18UGAGRGE	18 AGR	Agricultural	Unit II - Soil	Unit II - Soil	Unit II - Soil	
		102	Heritage*	mangement Unit IV Soil	mangement Unit IV Soil	mangement Unit IV Soil	
				concept	concept	concept Unit I - Indian	
						agricultural heritage	
3	18UGAGRGE	18 AGR	Introduction to	Unit I Indian forest			
		103	Forestry	policies; Unit II Forest			
				regeneration Unit V	regeneration Unit V	regeneration Unit V	regeneration Unit V
				agroforestry systems	agroforestry systems	agroforestry systems	agroforestry systems
4	18UGAGRGE	18 AEX	Rural Sociology &	UNIT II Social	UNIT II Social	UNIT II Social	UNIT II Social Structure,
		101	Educational	Structure, Social	Structure, Social	Structure, Social	Social Stratification and
			Psychology	Stratification and	Stratification and	Stratification and	Migration;UNIT III
				Migration;UNIT III	Migration;UNIT III	Migration;UNIT III	Social Control, Social
				Social Control, Social	Social Control, Social	Social Control, Social	Customs
				Customs	Customs	Customs	
5	18UGAGRGE	18 AEX	Human Values &	Unit I Universal human			
		102	Ethics (non	aspirations; unit II	aspirations; unit II	aspirations; unit II	aspirations; unit II Ethics
			gradial)*	Ethics	Ethics	Ethics	
6	18UGAGRGE	18 GPB	Introductory	Unit I origin of life,			
		101	Biology	morphology of plant			

7	18UGAGRGE	18 HOR	Fundamentals of	Unit I – soil and climate			Unit V- use of plant
		101	Horticulture	for horticultural crops			growth regulators
				Unit – IV – Lawn			-
				making, selction of			
				grasses			
8	8 18UGAGRGE	18 SAC	Fundamentals of	Unit I Pedological and	Unit I Pedological and	Unit I Pedological and	Unit I Pedological and
		101	Soil Science	edaphological concepts	edaphological concepts	edaphological concepts	edaphological concepts of
				of soil; Unit V Soil	of soil; Unit V Soil	of soil; Unit V Soil	soil; Unit V Soil pollution
				pollution - behaviour of	pollution - behaviour of	pollution - behaviour of	- behaviour of pesticides
				pesticides and inorganic	pesticides and inorganic	pesticides and inorganic	and inorganic
				contaminants,	contaminants,	contaminants,	contaminants, prevention
				prevention and	prevention and	prevention and	and mitigation of soil
				mitigation of soil	mitigation of soil	mitigation of soil	pollution.
				pollution.	pollution.	pollution.	
ç	18UGAGRGE	18 BIC	Fundamentals of	Unit III Metabolism of	Unit III Metabolism of	Unit III Metabolism of	
		101	Plant Biochemistry	carbohydrates -	carbohydrates -	carbohydrates -	
			and Biotechnology	Glycolysis, TCA cycle,.	Glycolysis, TCA cycle,	Glycolysis, TCA cycle,	
				Unit V - Cryo-	Glyoxylate cycle, Unit	Glyoxylate cycle, Unit	
				preservation -	V - Cryo-preservation -	V - Cryo-preservation -	
				Introduction to	Introduction to	Introduction to	
				recombinant DNA	recombinant DNA	recombinant DNA	
				methods - Physical	methods - Physical	methods - Physical	
				(Biotechnology	Biotechnology	Biotechnology	
				regulations.	regulations.	regulations.	
]	18UGAGRGE	18 ENG	Comprehension &	Unit III Business	Unit III Business	Unit III Business	Unit III Business
		101	Communication	correspondence Unit V	correspondence Unit V	correspondence Unit V	correspondence Unit V
			Skills in English	Interviews	Interviews	Interviews	Interviews
]	1 18UGAGRGE	18 NSS	NSS/NCC/Physical	Unit II Volunteerism and	Unit II Volunteerism and	Unit II Volunteerism and	Unit II Volunteerism and
		/NCC	Education & Yoga	shramdan, Citizenship,	shramdan, Citizenship,	shramdan, Citizenship,	shramdan, Citizenship,
		101	Practices	constitution and human	constitution and human	constitution and human	constitution and human
				rights Unit IV Health,	rights Unit IV Health,	rights Unit IV Health,	rights Unit IV Health,
				hygiene and sanitation,	hygiene and sanitation,	hygiene and sanitation,	hygiene and sanitation,

				Youth health, lifestyle,	Youth health, lifestyle,	Youth health, lifestyle,	Youth health, lifestyle,
				HIV AIDS and first aid,			
				Youth and yoga ;Unit V	Youth and yoga ;Unit V	Youth and yoga ;Unit V	Youth and yoga ;Unit V -
				- Disaster management	- Disaster management	- Disaster management	Disaster management
12	18UGAGRGE	18 AGR	Introductory Agro-	Unit I Climate &	Unit I Climate &	Unit I Climate &	Unit I Climate & Weather
		104	meteorology &	Weather Unit III	Weather Unit III	Weather Unit III	Unit III Weather
			Climate Change	Weather forcasting Unit	Weather forcasting Unit	Weather forcasting Unit	forcasting Unit IV -
				IV - Climate change	IV - Climate change	IV - Climate change	Climate change
13	18UGAGRGE	18 AEC	Fundamentals of	Unit II, utility theory;			
		101	Agricultural	law of diminishing	law of diminishing	law of diminishing	law of diminishing
			Economics	marginal utility, Equi-	marginal utility, Equi-	marginal utility, Equi-	marginal utility, Equi-
				marginal utility	marginal utility	marginal utility	marginal utility principle.
				principle.	principle.	principle.	
14	18UGAGRGE	18 AEN	Fundamentals of			Unit I- history of	Unit I- Insect
		101	Entomology			entomology in India	morphology
15	18UGAGRGE	18 AEX	Fundamentals of	Unit II- Extension	Unit II- Extension	Unit II- Extension	
		103	Agricultural	Agriculture	Agriculture	Agriculture	
			Extension	development	development	development	
			Education	programmes and rural,	programmes and rural,	programmes and rural,	
				community	community	community	
				development	development	development	
				programmes	programmes	programmes	
16	18UGAGRGE	18	Agricultural	Unit II- carbo cycle and	Unit V – bio fuel	Unit V – bio fertilizer	Unit I- role of microbes
		AGM	Microbiology	carbon di oxide fixation	production, bio	production technology	in fertility of soil and
		101			degradation		plant growth
17	18UGAGRGE	18 GPB	Fundamentals of	Unit III- gene mutation,	Unit III- gene mutation,		
		102	Genetics	Unit -V - protein	Unit -V - protein		
				synthesis	synthesis		
18	18UGAGRGE	18 CRP	Fundamentals of	Unit IV- growth and	Unit IV- growth and	Unit IV- growth and	
		101	Crop Physiology	development, Glycolysis,	development, Glycolysis,	development, Glycolysis,	
				TCA cycle	TCA cycle	TCA cycle	

19	18UGAGRGE	18 PAT	Fundamentals of				Unit I – history of plant
		101	Plant Pathology				pathology , unit II-
							characteristics of
							pathogen and its life cycle
20	18UGAGRGE	18 SWE	Soil and Water	Unit I Soil erosion &			
		101	Conservation	measurement ; UNIT II			
			Engineering	Erosion control; Unit V			
				Micro irrigation system	Micro irrigation system	Micro irrigation system	Micro irrigation system
21	18UGAGRGE	18 AGR	Crop Production	Production package of	Production package of		
		201	Technology - I	field crops	field crops		
			(Kharif Crops)				
22	18UGAGRGE	18 AGR	Education of Tour	-	-	-	_
		202					
24	18UGAGRGE	18 AEC	Agricultural	Unit I Credit analysis: 3	Unit I Credit analysis: 3	Unit I Credit analysis: 3	
		201	Finance and Co-	R's, and 5C's and 7 Ps	R's, and 5C's and 7 Ps	R's, and 5C's and 7 Ps	
			operation	of credit analysis.	of credit analysis.	of credit analysis.	
				Sources of agricultural	Sources of agricultural	Sources of agricultural	
				finance: institutional and	finance: institutional and	finance: institutional and	
				non-institutional	non-institutional	non-institutional	
				sources, social control	sources, social control	sources, social control	
				and nationalization of	and nationalization of	and nationalization of	
				commercial banks,	commercial banks,	commercial banks,	
				RRBs, and schemes for	RRBs, and schemes for	RRBs, and schemes for	
				financing weaker	financing weaker	financing weaker	
				sections. Crop	sections. Crop	sections. Crop	
				insurance,	insurance,	insurance,	
				AICI,PMFBY.	AICI,PMFBY.	AICI,PMFBY.	
25	18UGAGRGE	18 AMP	Livestock and	Unit – I Different	Unit – II Classification	Unit -III Disease	Unit – IV Classification
		201	Poultry	livestock development	of feed stuffs	prevention and control	of diseases, bacterial,
			Management	in tamilnadu	concentrate and	of swine disease ,foot	viral and protozoa
					roughage, comparison	and mouth disease, ecto	symptoms and prevention
					total mixed laction,	and endo parasites	

26	18UGAGRGE	18 ENS	Environmental	Unit I Natural resource,	Unit I Natural resource,	Unit I Natural resource,	
		201	Studies and	renewable energy, Unit	renewable energy, Unit	renewable energy, Unit	
			Disaster	III ecosystem concept	III ecosystem concept	III ecosystem concept	
			Management	Unit IV Biodiversity	Unit IV Biodiversity	Unit IV Biodiversity	
				and Conservation	and Conservation	and Conservation	
27	18UGAGRGE	18 FMP	Farm Machinery	Unit III tillage	Unit III tillage	Unit III tillage	
		201	and Power	implements; Unit V	implements; Unit V	implements; Unit V	
				Plant protection &	Plant protection &	Plant protection &	
				Harvesting Equipments	Harvesting Equipments	Harvesting Equipments	
28	18UGAGRGE	18 GPB	Fundamentals of	Unit III Breeding	Unit III Breeding	Unit III Breeding	Unit III Breeding
		201	Plant Breeding	methods in asexually	methods in asexually	methods in asexually	methods in asexually
				propagated crops, clonal	propagated crops, clonal	propagated crops, clonal	propagated crops, clonal
				selection and	selection and	selection and	selection and
				hybridization Unit V	hybridization Unit V	hybridization Unit V	hybridization Unit V
				Biotechnological tools-	Biotechnological tools-	Biotechnological tools-	Biotechnological tools-
				DNA markers and	DNA markers and	DNA markers and	DNA markers and marker
				marker assisted	marker assisted	marker assisted	assisted selection
				selection	selection	selection	
29	18UGAGRGE	18 HOR	Production	Unit – I Production of			
		201	Technology for	vegetables, Climate and	vegetables	vegetables	vegetables
			Vegetables and	soil, varieties and			
			Spices	hybrids			
				Unit – II Grafting in			
				vegetable crops			
30	18UGAGRGE	18	Agro-Informatics	Unit – I MS Word,			
		COM		Powerpoint, MS-	Powerpoint, MS-	Powerpoint, MS-	Powerpoint, MS-Access,
		201		Access, Creating mail	Access, Creating mail	Access, Creating mail	Creating mail and search
				and search engines	and search engines	and search engines	engines
31	18UGAGRGE	18 MAT	Statistical Methods	Unit – I Measures of			
		201		central tendency,	central tendency,	central tendency,	central tendency,
				arithmetic mean,	arithmetic mean,	arithmetic mean,	arithmetic mean,
				geometric mean	geometric mean	geometric mean	geometric mean

				Unit – II Measures of			
				dispersion – Range,	dispersion – Range,	dispersion – Range,	dispersion – Range, mean
				mean deviation, co	mean deviation, co	mean deviation, co	deviation, co efficient of
				efficient of variation	efficient of variation	efficient of variation	variation
				Unit – III Chi sauare test			
				Unit -IV Randomized	Unit -IV Randomized	Unit -IV Randomized	Unit -IV Randomized
				block design, Latin	block design, Latin	block design, Latin	block design, Latin
				square design	square design	square design	square design
32	18UGAGRGE	18 AGR	Farming System &	Unit – I Cropping	Unit – I Cropping	Unit – I Cropping	Unit – I Cropping pattern,
		203	Sustainable	pattern, cropping system	pattern, cropping system	pattern, cropping	cropping system
			Agriculture	Unit -II Integrated	Unit -II Integrated	system, Agro- climatic	Unit -II Integrated
				farming system	farming system	zones of crops	farming system
						Unit -II Integrated	
						farming system	
33	18UGAGRGE	18 AGR	Crop Production	Unit – I After cultivation	Unit – II Hay and silage	Unit – II Production	Unit – I sugarbeet
		204	Technology - II	practices of sugarcane	making	technology of mesta	cultivation
			(Rabi Crops)	Unit -II Fodder and			
				forage cultivation			
34	18UGAGRGE	18 AGR	Irrigation Water	Unit I Soil water plant	Unit I Soil water plant	Unit III- Irrigation	
		205	Management	relation ;Unit III-	relation ;Unit III-	methods	
				Irrigation methods &	Irrigation methods &		
				Micro irrigation	Micro irrigation		
35	18UGAGRGE	18 AEC	Agricultural	Unit II Marketing	Unit II Marketing	Unit II Marketing	Unit II Marketing process
		202	Marketing Trade &	process and functions;	process and functions;	process and functions;	and functions; Unit III
			Prices	Unit III Market	Unit III Market	Unit III Market	Market functionaries and
				functionaries and	functionaries and	functionaries and	marketing channels
				marketing channels	marketing channels	marketing channels	
36	18UGAGRGE	18 AEX	Communication	Unit I- Communication	Unit I- Communication	Unit I- Communication	Unit I- Communication
		201	Skills and	skills, Unit II- Reading			
			Personality	and comprehension of	and comprehension of	and comprehension of	and comprehension of
			Development	general and technical	general and technical	general and technical	general and technical
				articles, Unit V-	articles, Unit V-	articles, Unit V-	articles, Unit V-

				Organizing seminars	Organizing seminars	Organizing seminars	Organizing seminars and
				and conferences	and conferences	and conferences	conferences
37	18UGAGRGE	18 ERG	Renewable Energy	Unit III- Solar energy	Unit III- Solar energy	Unit III- Solar energy	Unit III- Solar energy and
		211	and Green	and application, Unit IV	and application, Unit IV	and application, Unit IV	application, Unit IV -
			Technology	- wind energy &	- wind energy & - wind energy &		wind energy & windmill
				windmill Unit V-Bio	windmill Unit V- Bio windmill Unit V- Bio		Unit V- Bio fuels
				fuels	fuels	fuels	
38	18UGAGRGE	18 HOR	Production	Unit – I Physiological	Unit – I Physiological	Unit – I Physiological	Unit – I Physiological
		202	Technology for	disorders of banana,	disorders of banana,	disorders of Fruits,	disorders of Fruits,
			Fruit and	Sucker treatment	Sucker treatment	Sucker treatment,	Sucker treatment,
			Plantation Crops			Production technology	Production technology of
						of plantation crops	plantation crops
39	18UGAGRGE	18 PAT	Principles of	Unit III Survey,	Unit III Survey,	Unit III Survey,	Unit III Survey,
		201	Integrated Pest and	surveillance and	surveillance and	surveillance and	surveillance and
			Disease	forecasting of Insect	forecasting of Insect	forecasting of Insect	forecasting of Insect pest
			Management	pest and diseases. Unit	pest and diseases. Unit	pest and diseases. Unit	and diseases. Unit IV
				IV Safety issues in	IV Safety issues in	IV Safety issues in	Safety issues in pesticide
				pesticide uses. Political,	pesticide uses. Political,	pesticide uses. Political,	uses. Political, social and
				social and legal	social and legal	social and legal	legal implication of IPM.
				implication of IPM.	implication of IPM.	implication of IPM.	
40	18UGAGRGE	18 SAC	Problematic Soils	Unit – I Different types	Unit – I Different types	Unit – I Different types	Unit – I Different types of
		201	and their	of problematic soils,	of problematic soils,	of problematic soils,	problematic soils, agro
			Management	agro eco systems	agro eco systems	agro eco systems	eco systems
				Unit – II sodic soils,	Unit – II sodic soils,	Unit – II sodic soils,	Unit – II sodic soils, acid
				acid soils, soil pollution	acid soils, soil pollution	acid soils, soil pollution	soils, soil pollution
				Unit – III Taxonomic	Unit – III Taxonomic	Unit – III Taxonomic	Unit – III Taxonomic
				classification of soils	classification of soils	classification of soils	classification of soils
41	18UGAGRGE	18 SST	Principles of Seed	Unit II - Seed	Unit II - Seed	Unit II - Seed	Unit II - Seed
		201	Technology	production,III-Post	production,III-Post	production,III-Post	production,III-Post
				harvest handling of	harvest handling of	harvest handling of	harvest handling of seeds;
				seeds; Unit IV-Seed	seeds; Unit IV-Seed	seeds; Unit IV-Seed	Unit IV-Seed quality and
							testing,Certification

				quality and testing Certification	quality and testing Certification	quality and testing Certification	
42	18UGAGRGE	18 GPB 301	Crop Improvement	UNIT I center of origin Unit III- concepts of	UNIT I center of origin Unit III- concepts of	UNIT I center of origin Unit III- concepts of	
				breeding self and cross pollination	breeding self and cross pollination	breeding self and cross pollination	
43	18UGAGRGE	18 AGR 301	Rainfed Agriculture & Watershed Management	Unit III- soil erosion Unit V- Fertilizers ,cropping pattern	Unit III- soil erosion Unit V- Fertilizers ,cropping pattern	Unit III- soil erosion Unit V- Fertilizers ,cropping pattern	Unit III- soil erosion Unit V- Fertilizers ,cropping pattern
44	18UGAGRGE	18 AGR 302	Practical Crop Production - I (Kharif Crops)	Seasons and climatic conditions of crops, Nutrient management of crops	Seasons and climatic conditions of crops, Nutrient management of crops	Seasons and climatic conditions of crops, Nutrient management of crops	Seasons and climatic conditions of crops, Nutrient management of crops, cost of cultivation
45	18UGAGRGE	18 AEN 301	Pests of Crops and Stored Grain and their Management – I	Unit I General account on nature and type of damage by different arthropod pests	Unit I General account on nature and type of damage by different arthropod pests	Unit I General account on nature and type of damage by different arthropod pests	Unit I General account on nature and type of damage by different arthropod pests Unit V - Locust management
46	18UGAGRGE	18 AEX 301	Entrepreneurship Development and Business Communication	Unit I- Agri entrepreneurship ; Unit III - Marketing management supply chain management and Business leadership skills	Unit I- Agri entrepreneurship ; Unit III - Marketing management supply chain management and Business leadership skills	Unit I- Agri entrepreneurship ; Unit III - Marketing management supply chain management and Business leadership skills	Unit I- Agri entrepreneurship ; Unit III - Marketing management supply chain management and Business leadership skills
47	18UGAGRGE	18 HOR 301	Production Technology for Ornamental Crops, MAP and Landscaping	Production Technology for Ornamental Crops, MAP and Landscaping			Production Technology for Ornamental Crops, MAP and Landscaping

48	18UGAGRGE	18 PAT 301	Diseases of Field and Horticultural Crops and their Management - I	Unit I Symptoms, etiology, disease cycle and management of major diseases -Cereals ; Unit II -Symptoms, etiology, disease cycle and management of major diseases of Pulses	Unit I Symptoms, etiology, disease cycle and management of major diseases -Cereals ; Unit II -Symptoms, etiology, disease cycle and management of major diseases of Pulses	Unit I Symptoms, etiology, disease cycle and management of major diseases -Cereals ; Unit II -Symptoms, etiology, disease cycle and management of major diseases of Pulses; Unit IV Symptoms, etiology, disease cycle and management of Cash crops	
49	18UGAGRGE	18 SAC 301	Manures, Fertilizers and Soil Fertility Management	Unit – I Nutrient Interaction in soil. Unit – II Classification of manures and fertilizers Unit -III Classification of nutrients Unit – IV Methods of fertilizer application in soil	Unit – I Nutrient Interaction in soil. Unit – II Classification of manures and fertilizers Unit -III Classification of nutrients Unit – IV Methods of fertilizer application in soil	Unit – I Nutrient Interaction in soil. Unit – II Classification of manures and fertilizers Unit -III Classification of nutrients Unit – IV Methods of fertilizer application in soil	Unit – I Nutrient Interaction in soil. Unit -III Classification of nutrients Unit – IV Methods of fertilizer application in soil
50	18UGAGRGE	18 IPR 301	Intellectual Property Rights	Types of Intellectual property rights,Patent systems, Protection of plant varieties	Types of Intellectual property rights,Patent systems, Protection of plant varieties	Types of Intellectual property rights,Patent systems, Protection of plant varieties	Types of Intellectual property rights,Patent systems, Protection of plant varieties
51	18UGAGRGE	18 AGR 303	Geoinformatics and Nano- technology and Precision Farming	Unit I- Precision agriculture; Unit II remote sensing Unit III- nanotechnology	Unit I- Precision agriculture; Unit II remote sensing Unit III- nanotechnology	Unit I- Precision agriculture; Unit II remote sensing Unit III- nanotechnology	Unit I- Precision agriculture; Unit II remote sensing Unit III- nanotechnology

52	18UGAGRGE	18 GPB 302	Crop Improvement - II (Rabi Crops)	UNIT I center of origin Unit III- concepts of breeding self and cross	UNIT I center of origin U breeding self and cross po	nit III- concepts of ollination	
53	18UGAGRGE	18 AGR	Practical Crop	pollination Seasons and climatic	Seasons and climatic	Seasons and climatic	Seasons and climatic
		304	Production - II (Rabi Crops)	conditions of crops, Nutrient management of crops	conditions of crops, Nutrient management of crops	conditions of crops, Nutrient management of crops	conditions of crops, Nutrient management of crops
54	18UGAGRGE	18 AGR 305	Principles of Organic Farming	Unit – I Organic farming Unit – II On farm wastes, off farm wates Unit – III Production technology of vermicompost Unit – IV Preparation of panchagavya, dasagavya Unit – V Bio control agents	Unit – I Organic farming Unit – II On farm wastes, off farm wates Unit – V Bio control agents	Unit – I Organic farming Unit – II On farm wastes, off farm wates Unit – V Bio control agents	Unit – I Organic farming, bio diversity conservation Unit – II On farm wastes, off farm wates Unit – V Bio control agents
55	18UGAGRGE	18 AEC 301	Farm Management, Production & Resource Economics	Unit III farm planning and budgeting; Unit IV Concept of risk and uncertainty in agriculture production	Unit III farm planning and budgeting; Unit IV Concept of risk and uncertainty in agriculture production	Unit III farm planning and budgeting; Unit IV Concept of risk and uncertainty in agriculture production	
56	18UGAGRGE	18 AEN 302	Pest of Horticulture Crops and Management of Beneficial Insects	UNIT 1- General account on nature and type of damage by different arthropod pests. UNIT-2 Identification of major parasitoids and	UNIT-1 General account on nature and type of damage by different arthropod pests.	UNIT-1 General account on nature and type of damage by different arthropod pests. UNIT-II Identification of major parasitoids and predators commonly	UNIT -III Types of silkworm, voltinism and biology of silkworm.

				predators commonly used in biological control		used in biological control	
57	18UGAGRGE	18 FSN 301	Principles of Food Science and Nutrition	Unit – I Food physical characteristics, concepts of food science Unit -II Carbohydrates, proteins, vitamins, minerals, amino acids Unit – III Production of fermented foods		Unit -II Carbohydrates, proteins, vitamins, minerals, amino acids Unit – III Production of fermented foods	Unit – I Food physical characteristics, concepts of food science Unit -II Carbohydrates, proteins, vitamins, minerals, amino acids Unit – III Production of fermented foods
58	18UGAGRGE	18 HOR 302	Post-Harvest Management and Value Addition of Fruits and Vegetable	Unit – I Causes of post harvest losses Unit – II Post harvest diseases and disorders, heat, chilling and freezing injury	Unit – II Post harvest diseases and disorders, heat, chilling and freezing injury	Unit – II Post harvest diseases and disorders, heat, chilling and freezing injury	Unit – II Post harvest diseases and disorders, heat, chilling and freezing injury
59	18UGAGRGE	18 PAT 302	Diseases of Field and Horticultural Crops and their Management - II	Unit I Symptoms, etiology, disease cycle and management of tropical crops	Unit I Symptoms, etiology, disease cycle and management of tropical crops	Unit I Symptoms, etiology, disease cycle and management of tropical crops Unit II Symptoms, etiology, disease cycle and management of temperate crops	
60	18UGAGRGE	18 PCA 301	Protected Cultivation and Secondary Agriculture	Unit – I Introduction of green house gases Unit – II Irrigation used in green house gases Unit – III Commerical grain dryers	Unit – II Irrigation used in green house gases Unit – III Commerical grain dryers		Unit – II Irrigation used in green house gases Unit – III Commerical grain dryers

61	19UCACDCE	10 AEV	Durol A griculturol	Villaga attachment	agro industrial	agro inductrial	
01	IðUGAGKUE	10 AEA 401		v mage attachment	agro industriai	agro industriai	
		401	work Experience	programme, research	attachment	attachment	
			and Agro-industrial	station attachment			
			Attachment	programame, agro			
			(RAWE & AIA)	industrial attachment			
62	18UGAGRGE	18 PRJ	Project Report	*	*		
		401	Preparation,				
			Presentation and				
			Evaluation				
63	18UGAGRGE	18 EXP	Production	Unit – I Production	Unit – I Production	Unit – I Production	Unit – I Production
			Technology for	technology of Azolla,	technology of Azolla	technology of Azolla	technology of Azolla
			Bioagents and	Bio fertilizer,			
			Biofertilizer	vermicompost			
64	18UGAGRGE	18 EXP	Seed Production	Unit III - Seed crop			
			and Technology	management and hybrid	management and hybrid	management and hybrid	management and hybrid
				seed production	seed production	seed production	seed production
				techniques Unit V -	techniques Unit V -	techniques Unit V -	techniques Unit V - Seed
				Seed testing and	Seed testing and	Seed testing and	testing and marketing
				marketing	marketing	marketing	
65	18UGAGRGE	18 EXP	Mushroom	Unit 1 : Different types of			
			Cultivatiuon	of mushroom,	of mushroom ,	of mushroom ,	mushroom, Morphology
			Technology	Morphology Unit 3 :	Morphology Unit 3 :	Morphology Unit 3 :	Unit 3 : Problems in
				Problems in cultivation	Problems in cultivation	Problems in cultivation	cultivation of
				of mushroomUnit 4 :	of mushroomUnit 4 :	of mushroomUnit 4 :	mushroomUnit 4 : Post
				Post harvest technology	Post harvest technology	Post harvest technology	harvest technology
66	18UGAGRGE	18 EXP	Soil, Plant, Water	1. Assessment of soil			
			and Seed Testing	physical and chemical	physical and chemical	physical and chemical	physical and chemical
				quality indices of	quality indices of	quality indices of	quality indices of
				collected soil samples4.	collected soil samples4.	collected soil samples4.	collected soil samples4.
				Assessment of soil	Assessment of soil	Assessment of soil	Assessment of soil
				biological quality	biological quality	biological quality	biological quality indices
				indices and	indices and	indices and	and interpretation 12.

				interpretation 12. Deriving the nutrient requirement using DSSIFER soft ware for different crops 13. Issue of Soil Health Card and Fertilizer prescription using DSSIFER software	interpretation 12. Deriving the nutrient requirement using DSSIFER soft ware for different crops 13. Issue of Soil Health Card and Fertilizer prescription using DSSIFER software	interpretation 12. Deriving the nutrient requirement using DSSIFER soft ware for different crops 13. Issue of Soil Health Card and Fertilizer prescription using DSSIFER software	Deriving the nutrient requirement using DSSIFER soft ware for different crops 13. Issue of Soil Health Card and Fertilizer prescription using DSSIFER software
67	18UGAGRGE	18 EXP	Commercial Beekeeping	Honey bees for crop pollination and seed production; Stingless bees, little bees, rock bees;Honey extraction, processing, purity testing and value addition, visit to honey processing Unit conservation and honey harvest	Honey bees for crop pollination and seed production; Stingless bees, little bees, rock bees;Honey extraction, processing, purity testing and value addition, visit to honey processing Unit conservation and honey harvest	Honey bees for crop pollination and seed production; Stingless bees, little bees, rock bees;Honey extraction, processing, purity testing and value addition, visit to honey processing Unit conservation and honey harvest	
68	18UGAGRGE	18 EXP	Poultry Production Technology	Rearing of birds, Visit to poultry unit	Rearing of birds, Visit to poultry unit		Rearing of birds
69	18UGAGRGE	18 EXP	Commercial Horticulture	Nursery technology, value addition products, Visit to local nursery		Nursery technology, value addition products	Nursery technology, value addition products
70	18UGAGRGE	18 EXP	Floriculture and Landscaping	commercial Landscape Gardening (Green consultancy, Green wall fixtures, Green showcases, Green wall hangings, Green	commercial Landscape Gardening (Green consultancy, Green wall fixtures, Green showcases, Green wall hangings, Green	commercial Landscape Gardening (Green consultancy, Green wall Unit 1 : Different types of mushroom, Morphology Unit 3 :	Unit 1 : Different types of mushroom, Morphology Unit 3 : Problems in cultivation of mushroomUnit 4 : Post harvest technology

				furniture, Cacti buckets	furniture, Cacti buckets	Problems in cultivation	
				and flower bouquets,	and flower bouquets,	of mushroomUnit 4 :	
				Green glasses, Trees	Green glasses, Trees	Post harvest technology	
				indoor, Smart garden	indoor, Smart garden	fixtures, Green	
				<i>etc.</i> ,) ;	<i>etc.</i> ,) ;	showcases, Green wall	
						hangings, Green	
						furniture, Cacti buckets	
						and flower bouquets,	
						Green glasses, Trees	
						indoor, Smart garden	
						<i>etc.</i> ,) ;	
71	18UGAGRGE	18 EXP	Food Processing	Preservation of food,			Export and import of
				Pickle making, jam			value addition products
				making, jelly making			
72	18UGAGRGE	18 EXP	Agriculture Waste	Collection and	Collection and	Collection and	Collection and
			Management	characterization of	characterization of	characterization of	characterization of solid-
				solid-wastes – analyzing	solid-wastes – analyzing	solid-wastes – analyzing	wastes – analyzing
				physical and chemical	physical and chemical	physical and chemical	physical and chemical
				properties – site	properties – site	properties – site	properties – site selection
				selection for composting	selection for composting	selection for composting	for composting ;value
				;value addition through	;value addition through	;value addition through	addition through
				beneficial microbes	beneficial microbes	beneficial microbes	beneficial microbes
73	18UGAGRGE	18 EXP	Organic				
			Production				
			Technology				
74	18UGAGRGE	18 EXP	Commercial	UNIT II: SILKWORM	UNIT II: SILKWORM	UNIT II: SILKWORM	
			Sericulture	REARING AND	REARING AND	REARING AND	
				MANAGEMENT Unit	MANAGEMENT Unit	MANAGEMENT Unit	
				III: Silk Reeling	III: Silk Reeling	III: Silk Reeling	



SCHOOL OF AGRICULTURE

2018 REGULATION

Sem	Course	Course title	CO's	PO's						
	code			PO1	PO2	PO3	PO4	PO5	PO6	PO7
Ι	18 AGR	Fundamentals of	· Students can learn	*	*				*	
	101	Agronomy	about basic aspects of							
			Agronomy from sowing							
			up to harvest including							
			various tools and							
			implements used for field							
			operations							
			· Students aware	*	*				*	
			about the irrigation							
			principles, methods of							
			irrigation and its							
			application in field crops							
			· Students can learn	*	*				*	
			about the basics of weed							
			management in field							
			crops.							
	18 AGR	Agricultural	• The students have		*					
	102	Heritage*	gained the basic							
			knowledge about							
			agricultural history of							
			India.							

			• They have been	*	*			
			familiarized with the					
			indigenous knowledge and					
			present scenario of Indian					
			agriculture.					
			• They learn to			*		
			strengthen and conserve					
			the sustainable use of bio					
			diversity agricultural and					
			rural development					
			• They study the	*				
			ancient culture of					
			agriculture and make it					
			use in modern agriculture					
			for sustainability.					
•	18 AGR	Introduction to	· Students can learn	*				
	103	Forestry	about the basic aspects of					
			Forestry					
			· Students can					
			understand the importance					
			of forests and Agro					
			forestry system					
			· Students learn		*		*	
			about techniques of tree					
			planting and its					
			management					
			· They learn about				*	
			classification of forest in					
			which they may know					
			about the types of forest					
			which is under humane					
			intervention which in turn					
		helps to know the facts to conserve it.						
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18 AEX 101	K Rural Sociology & Educational Psychology	• The students can learn the Rural Social situation, their Structure and Function for effective Agricultural Extension.				*		
		• The students may be motivated towards learning, personality and good behavior.		*				
		• The students will understand investigates the social, cultural, political and religious problems of rural society.			*			
18 AEX 102	K Human Values & Ethics (non gradial)	• The students will gain knowledge about the concept human values.						
		• They know about the basis interests, choices, needs, desires and preferences of human.					*	
		• They also know about positive human behavior and actions of humane daily lives.						

18 GPB	Introductory	• The students will	*					
101	Biology	know about botanical						
		features and economic						
		importance of different						
		field and horticulture						
		crops.						
		• The students will		*		*		
		also know about the basics						
		of biology in relation with						
		agriculture.						
18 HOR	Fundamentals of	• After completion of	*	*				
101	Horticultre	this course, the students						
		will acquire basic						
		knowledge about the						
		fundamental aspects of						
		horticulture.						
		• The students learn	*	*			*	
		about the sexual and						
		asexual Propagation						
		techniques.						
		• The students in turn						*
		will find it easier to						
		undergo other						
		horticultural courses in the						
		following semesters.						
		· Students will	*					
		realize the importance of						
		Horticulture and its						
		impact in the human						
		health, economic						
		development of farmers						
		and National economy						

18 SAC	Fundamentals of	• Understanding the	*				
101	Soil Science	Soil forming rocks and					
		minerals, soil forming					
		processes.					
		· Studying the		*			
		physical and chemical					
		properties of soils					
		• Studying about soil				*	
		organic matter, soil					
		pollution and mitigation.					
		• The course will				*	
		provide the over view of					
		fundamental concepts in					
		soil science genesis,					
		classification and					
		morphology, soil physics,					
		soil chemistry, fertility					
		and land use pattern.					
18 BIC 101	Fundamentals of	• The students will	*				
	Plant Biochemistry	learn the fundamental of					
	and Biotechnology	plant biochemistry and					
		briefly learn about					
		biological techniques.					
		• The students will	*				
		get the knowledge about					
		the classification and					
		nomenclatures of plant					
		growth and easily					
		understand techniques					
		about the bio technology.					
		• The students will		*			
		increase awareness about					
		the concept of					

			applications of plant biotechnology					
			• On completion of	*				
			the course, students are					
			able to understand the					
			basic component or bio					
			molecules of plant					
			substances.					
	18 ENG	Comprehension &	· The students are				*	
	101	Communication	well equipped on					
		Skills in English	Communication skills and					
			handling of interviews.					
			The students also	*			*	
			know about grammatical					
			knowledge					
	18 NSS /	NSS/NCC/Physical	Students will come	*				
	NCC 101	Education & Yoga	to know basic knowledge					
		Practices	on NSS,NCC programs,					
			• They also know					*
			about youth development					
			program,					
			· Student gain					
			knowledge on yoga,					
			health, hygiene and					
			sanitation					
Π	18 AGR	Introductory Agro-	• The students will	*	*			
	104	meteorology &	get acquainted with recent					
		Climate Change	development in agro –					
			meteorology with					
			historical development of					
			climate change.					

		• The students will		*			*	
		study the important						
		characterization of						
		agricultural climate						
		change.						
		• They study crop		*			*	
		planning for prevailing						
		climate for sustainable						
		agriculture						
		• They study about		*			*	
		crop management to						
		various climate change						
		and ways to mitigate it.						
		• They study about	*				*	
		various instruments used						
		in agro- meteorology.						
18 AEC	Fundamentals of	• The students have	*					
101	Agricultural	been educated towards the						
	Economics	principles, laws,						
		production and						
		macroeconomic concepts.						
		• The students will	*			*	*	
		gain the knowledge on						
		basic principles of						
		economics including the						
		problem of economic						
		decision-making.						
		• Students will know	*				*	
		about laws of economics						
		and macroeconomic						
		concepts.						

 			1					
18 AEN	Fundamentals of	Know about	*					
101	Entomology	arthropods and especially						
		insects with their						
		morphological features						
		· Identify insects of		*			*	
		economic importance and						
		acquire working skills for						
		collecting, mounting, and						
		preserving insects						
		· Know about	*	*			*	
		pesticide classification						
		and their formulations and						
		maintenance of pesticide						
		appliances						
		• The students will	*	*			*	
		gain the knowledge on						
		basic principles of						
		economics including the						
		problem of economic						
		decision-making, laws of						
		economics and						
		macroeconomic concepts.						
18 AEX	Fundamentals of	• The students will	*		*	*	*	
103	Agricultural	gain knowledge about						
	Extension	various schemes,						
	Education	community development						
		programmes, and rural						
		development projects.						
		• The students know	*		*		*	
		about leadership and						
		efficiency						

		• They gain		*	*	*	
		knowledge to provide					
		appropriate solution of the					
		farmer's problems.					
18 AGM	Agricultural	· Gain hands on skill	*				
101	Microbiology	development in safe					
		handling, culturing and					
		staining of					
		microorganisms.					
		· Get an complete					
		understanding on					
		historical events, diversity					
		and scope of microbes					
		• Understanding the	*			*	
		structural characters, cell					
		growth, recombination					
		techniques and metabolic					
		features of					
		microorganisms					
		· Gather theoretical	*			*	
		background of microbes					
		in soil fertility, crop					
		production, biofertilizers,					
		biopesticides and biofuel					
		production					
		· Finally students			*	*	*
		will able to perform					
		various aseptic techniques					
		; gain instrumentation and					
		equipment based					
		knowledge					

18 GPB	Fundamentals of	• Basic principles of	*					
102	Genetics	inheritance and modern						
		concepts of genetics will						
		be exposed to student						
		• The students know				*		
		about genetics principles						
		and their application, ultra						
		structure of cell and cell						
		organelles.						
18 CRP 101	Fundamentals of	• The students will	*	*		*		
	Crop Physiology	learn about the basic						
		concepts and application						
		of crop physiology.						
18 PAT 101	Fundamentals of	• Understanding the	*					
	Plant Pathology	Development and History						
		of plant pathology						
		• Understanding						
		Terms, Concepts and						
		Classification of plant						
		Diseases						
		• Learning about the	*				*	
		pathogens, plant						
		pathology history & their						
		impacts in the						
		environment						
		• Understanding the	*				*	
		important disease causing						
		agents and their basic						
		symptoms						
18 SWE	Soil and Water	• The students can	*					
101	Conservation	learn different types of						
	Engineering	erosion due to water and						
		wind.						

									-
			· The students can						
			learn different types of						
			gully control structures						
			and its suitability						
			· The students can		*			*	
			learn to estimate soil loss						
			by using USLE.						
			· The students can		*			*	
			learn the control methods						
			of soil erosion.						
III	18 AGR	Crop Production	· Students can learn	*	*			*	1
	201	Technology - I	about the Crop						
		(Kharif Crops)	classification and						
			cultivation practices of						
			various crops grown under						
			kharif season						
			· Students can gain	*	*		*	*	
			practical knowledge on						
			raising of nursery and						
			recording bio- metric						
			observation and working						
			of cost of cultivation for						
			various crops						
			· Students learn to	*	*				
			identify the development						
			and application of						
			advances in sciences						
			which leads to the						
			production of healthy						
			food.						

		— 1 1		•				1
		· To develop	*	*		*	*	
		cropping system for food						
		and value added products						
		which are compatable						
		with environment and						
		application of						
		advancement in science						
		and technology leading to						
		improved production of						
		safe and nutritious food						
18 AGR	Education of Tour	• The students aware					*	
202		and enriched with the						
		details on latest varieties,						
		technologies practiced in						
		various field crops and						
		horticultural crops in						
		different zones of Tamil						
		Nadu in South part of						
		India.						
		• They will expose					*	
		themselves into many						
		question and answer						
		session in research						
		stations through which						
		they can mould						
		themselves for their better						
		subject knowledge.						
18 AEC	Agricultural	· Students learn	*		*		*	
201	Finance and Co-	about agriculture finance.						
	operation	credits and cooperatives						
	of cranton	· They learn about			*		*	
		cooperation						
		cooperation,						

		entrepreneurship development.					
		• The students will	*	*		*	
		gain the knowledge on					
		principles of finance,					
		Banking and Co-					
		operation, and farm					
		financial analyses.					
18 AMP	Livestock and	• The students have	*				
201	Poultry	learned about basic					
	Management	knowledge on how to					
		manage and operate					
		livestock and poultry					
		farms					
		· The students will	*		*	*	
		get acquainted on					
		selection and breeding of					
		livestock and their					
		management aspects					
		· The students will	*		*	*	
		gain knowledge and skills					
		required to run broiler and					
		layer chicken farm					
		successfully					
18 ENS	Environmental	· Students learn	*				
201	Studies and Disaster	about ecosystems,					
	Management	pollution and other					
		problems related to					
		environment					
		· Students learn				*	
		about types of disasters					
		and its management					

		• The students will	*							
		gain the knowledge of the								
		ecosystems, Food chains,								
		food webs and ecological								
		pyramids.								
		· The students learn	*					*		
		the classification,								
		biological function of								
		natural resources.								ļ
18 FMP	Farm Machinery	• The students can	*				*	*		
201	and Power	get practical knowledge in								
		operation and								
		maintenance of tractor,								
		power tillage, sprayer,								
		reaper and multi crop								
		thresher.								
		• The students can	*				*	*		
		learn in selection of								
		suitable farm equipment								
		for tillage to harvest based								
		on field and crop								
		conditions.								
		• The students can	*				*	*		
		able to estimate the cost of								
		farm equipment operation,								
		coverage and power								
		requirements								
	18 FMP 201	18 FMP 201Farm Machinery and Power	 The students will gain the knowledge of the ecosystems, Food chains, food webs and ecological pyramids. The students learn the classification, biological function of natural resources. 18 FMP Farm Machinery operation and Power 18 FMP and Power The students can get practical knowledge in operation and maintenance of tractor, power tillage, sprayer, reaper and multi crop thresher. The students can learn in selection of suitable farm equipment for tillage to harvest based on field and crop conditions. The students can able to estimate the cost of farm equipment operation, coverage and power 	·The students will gain the knowledge of the ecosystems, Food chains, food webs and ecological pyramids.*·The students learn the classification, biological function of natural resources.*18 FMP 201Farm Machinery and Power·The students can get practical knowledge in operation and maintenance of tractor, power tillage, sprayer, reaper and multi crop thresher.*·The students can get practical knowledge in operation and maintenance of tractor, power tillage, sprayer, reaper and multi crop thresher.*·The students can learn in selection of suitable farm equipment for tillage to harvest based on field and crop conditions.*·The students can able to estimate the cost of farm equipment operation, coverage and power requirements*	Image: state in the students will gain the knowledge of the ecosystems, Food chains, food webs and ecological pyramids. * Image: state in the students learn the classification, biological function of natural resources. * Image: state in the students can get practical knowledge in operation and maintenance of tractor, power tillage, sprayer, reaper and multi crop thresher. * Image: state in the students can learn in selection of suitable farm equipment for tillage to harvest based on field and crop conditions. * Image: students can able to estimate the cost of farm equipment operation, coverage and power *	• The students will gain the knowledge of the ecosystems, Food chains, food webs and ecological pyramids. * • The students learn the classification, biological function of natural resources. * 18 FMP Farm Machinery and Power • The students can get practical knowledge in operation and maintenance of tractor, power tillage, sprayer, reaper and multi crop thresher. * • The students can learn in selection of suitable farm equipment for tillage to harvest based on field and crop conditions. * • The students can able to estimate the cost of farm equipment operation, coverage and power *	* The students will gain the knowledge of the ecosystems, Food chains, food webs and ecological pyramids. * • The students learn the classification, biological function of natural resources. * 18 FMP Farm Machinery • The students can get practical knowledge in operation and maintenance of tractor, power tillage, sprayer, reaper and multi crop thresher. * • The students can get practical knowledge in operation and maintenance of tractor, power tillage, sprayer, reaper and multi crop thresher. * • The students can get practical knowledge in operation and maintenance of tractor, power tillage, sprayer, reaper and multi crop thresher. * • The students can learn in selection of suitable farm equipment for tillage to harvest based on field and crop conditions. * • The students can able to estimate the cost of farm equipment operation, coverage and power *	* The students will gain the knowledge of the ecosystems, Food chains, food webs and ecological pyramids. * • The students learn the classification, biological function of natural resources. * 18 FMP Farm Machinery and Power • The students can get practical knowledge in operation and maintenance of tractor, power tillage, sprayer, reaper and multi crop thresher. * * • The students can get practical knowledge in operation and maintenance of tractor, power tillage, sprayer, reaper and multi crop thresher. * * • The students can maintenance of tractor, power tillage on harvest based on field and crop conditions. * * * • The students can able to estimate the cost of farm equipment operation, coverage and power requirements * *	* The students will gain the knowledge of the ecosystems, Food chains, food webs and ecological pyramids. * * * * * The students learn the classification, biological function of natural resources. * * * * 18 FMP Farm Machinery and Power • The students can get practical knowledge in operation and maintenance of tractor, power tillage, sprayer, reaper and multi crop thresher. *	Image: space of the second chains, food webs and ecological pyramids. * * * * Image: space of the cosystems, Food chains, food webs and ecological pyramids. * * * * Image: space of the cosystems, Food chains, food webs and ecological pyramids. * * * * Image: space of the cosystems, Food chains, food webs and ecological pyramids. * * * * Image: space of the cosystems, Food chains, food webs and ecological pyramids. * * * * Image: space of the cosystems, Food chains, food webs and ecological pyramids. * * * * Image: space of the cosystems, food chains, food webs and ecological function of natural resources. * * * * Image: space of the cosystem and Power get practical knowledge in operation and maintenace of tractor, power tillage, sprayer, reaper and multi crop thresher. * * * * Image: space of the cosystem and ecological operation of suitable farm equipment for tillage to harvest based on field and crop conditions. * * * * Image: space of the cost of farm equipment operation, coverage and power requirements * * * * Image: space of the cost of fa

		· Students will be	*			*	*	*	
		equipped with sufficient							
		theoretical knowledge							
		with practical skills on							
		farm power sources, the							
		availability of tractors and							
		handling of tractors,							
		power tillers and various							
		implement used in land							
		preparation, sowing, inter							
		cultivation, plant							
		protection and harvesting							
		operations.							
18 GPB	Fundamentals of	• The Students will	*				*	*	*
201	Plant Breeding	gain Knowledge about the							
	C	various techniques of							
		quality seed production,							
		processing and seed							
		quality enhancement.							
		\cdot The students learn					*	*	*
		about the plant breeding							
		methodologies and							
		application employed for							
		self, cross and							
		vegetatively propagated							
		crops will be exposed							
18 HOR	Production	· The students will	*	*			*	*	
201	Technology for	learn about latest							
	Vegetables and	production technology of							
	Spices	Major and minor fruit							
	ĩ	crops and plantation							
		crops.							
	18 GPB 201 18 HOR 201	18 GPB 201Fundamentals of Plant Breeding18 HOR 201Production Technology for Vegetables and Spices	 Students will be equipped with sufficient theoretical knowledge with practical skills on farm power sources, the availability of tractors and handling of tractors, power tillers and various implement used in land preparation, sowing, inter cultivation, plant protection and harvesting operations. 18 GPB Fundamentals of Plant Breeding Plant	·Students will be equipped with sufficient theoretical knowledge with practical skills on farm power sources, the availability of tractors and handling of tractors, power tillers and various implement used in land preparation, sowing, inter cultivation, plant protection and harvesting operations.*18 GPBFundamentals of Plant Breeding·The Students will gain Knowledge about the various techniques of quality seed production, processing and seed quality enhancement.*·The students learn about the plant breeding methodologies and application employed for self, cross and vegetatively propagated crops will be exposed*18 HOR 201Production Technology for Vegetables and Spices·The students will errors and plantation crops.	· Students will be equipped with sufficient theoretical knowledge with practical skills on farm power sources, the availability of tractors, power tillers and various implement used in land preparation, sowing, inter cultivation, plant protection and harvesting operations. * 18 GPB Fundamentals of Plant Breeding · The Students will gain Knowledge about the various techniques of quality seed production, processing and seed quality enhancement. * · The students learn about the plant breeding methodologies and application employed for self, cross and vegetatively propagated crops will be exposed * 18 HOR Production · The students will 201 Production · The students will 18 HOR Production · The students will 201 Production · The students will 18 HOR Production · The students will 201 Production · The students will 201 Production · The students will 201 Production · The students will	Students will be * equipped with sufficient * theoretical knowledge with practical skills on farm power sources, the availability of tractors and handling of tractors, power tillers and various implement used in land preparation, sowing, inter cultivation, plant protection and harvesting operations. • 18 GPB Fundamentals of 201 Plant Breeding uilty enhancement. * • The Students will gain Knowledge about the various techniques of quality enhancement. • • The students learn about the plant breeding methodologies and application employed for self, cross and vegetatively propagated crops will be exposed • 18 HOR Production 201 Technology for Vegetables and production technology of Major and minor fruit crops.	* Students will be equipped with sufficient theoretical knowledge with practical skills on farm power sources, the availability of tractors and handling of tractors, power tillers and various implement used in land preparation, sowing, inter cultivation, plant protection and harvesting operations. * 18 GPB Fundamentals of Plant Breeding • The Students will gain Knowledge about the various techniques of quality seed production, processing and seed quality enhancement. * • The students learn about the plant breeding methodologies and application employed for self, cross and vegetatively propagated crops will be exposed * 18 HOR 201 Production • The students will tearn about latest production technology of Major and minor fruit crops and plantation crops. *	* Students will be equipped with sufficient theoretical knowledge with practical skills on farm power sources, the availability of tractors, power tillers and various implement used in land preparation, sowing, inter cultivation, plant protection and harvesting operations. * * 18 GPB Fundamentals of 201 • The Students will gain Knowledge about the various techniques of quality seed production, processing and seed quality enhancement. * * 18 HOR Production • The students learn about the plant breeding methodologies and application employed for self, cross and vegetatively propagated crops will be exposed * * 18 HOR Production • The students will earn about taest production technology of Spices * *	* Students will be equipped with sufficient theoretical knowledge with practical skills on farm power sources, the availability of tractors and handling of tractors, power tillers and various implement used in land preparation, sowing, inter cultivation, plant protection and harvesting operations. * * * * 18 GPB Fundamentals of Plant Breeding • The Students will gain Knowledge about the various techniques of quality seed production, processing and seed quality endancement. * * * • The students learn about the plant breeding methodologies and application employed for solf, cross and vegetatively propagated crops will be exposed * * * 18 HOR Production • The students will approaction technology of Major and minor fruit crops and plantation crops. * * * *

									_
		• The students will	*	*		*	*		ļ
		have a complete							
		knowledge on the							
		production technology of							
		vegetables and spices							
		crops at different							
		locations.							
18 COM	Agro-Informatics	At the end of this course,						*	
201		the students will able to							
		· Learn the basic						-	
		concept of Computer and							
		Internet							
		· Create document in							
		MS Word							
								-	
		· Do the Statistical							
		Calculations and draw the							
		chart using MS Excel							
		· Design Presentation						*	
		using MS Powerpoint							
		· Apply ICT for						*	
		Agriculture activities							
18 MAT	Statistical Methods	Upon completion of the				*			
201	Statistical Wethous	course the students will							
201		be able to:							
		· Be familiar with						-	
		basic concepts and terms							
						*			
		Solve problems				*			
		using appropriate							
		statistical measures							

			• Create and interpret		*				
			visual representation of						
			statistical data.						
			Make valid		*		*		
			decisions applying						
			statistical methods.						
	18 AGR	Farming System &	· Students learn	*	*		*		
	203	Sustainable	about the connection						
		Agriculture	between agriculture,						
			farming system and						
			cropping systems.						
			Students know	*	*		*	*	
			about the sustainable ways						
			to produce crops and its						
			management.						
IV	18 AGR	Crop Production	· Students can learn	*	*			*	
	204	Technology - II	about the Crop						
		(Rabi Crops)	classification and						
			cultivation practices of						
			various crops grown under						
			rabi season						
			• Students can gain	*	*		*		
			practical knowledge on						
			cultivation and						
			preservation of fodder						
			including recording bio						
			Including recording 010-						
			metric observation and						
			metric observation and working of cost of						
			metric observation and working of cost of cultivation for various rabi						

		• Students learn to identify the development and application of advances in sciences which leads to the production of healthy food.	*	*			*	
18 AGR 205	Irrigation Water Management	Students identified the ways to determine the need for irrigation.	*	*				
		 They learn about irrigation concepts like Irrigation scheduling, water use efficiency, crop water requirement etc They learn the importance of water management in agriculture which leads to better development of agricultural sustainability. 	*	*		*	*	
18 AEC 202	Agricultural Marketing Trade & Prices	• The students have been equipped with better marketing strategies and to handle it in a better way.		*			*	*
		• They know better about marketing functions and trade concepts.		*				*

		• The students will	*		*	*
		gain the knowledge of				
		market concepts				
		marketing of agricultural				
		commodities,				
		intermediaries involved,				
		domestic and export trade,				
		risk in agricultural				
		marketing.				
18 AEX	Communication	• The students will be				
201	Skills and	familiarized with various				
	Personality	communication skills.				
	Development	· They will develop				*
		as a better professionals				
		with inter personal skills.				
		· They will develop		 		*
		problem solving skills and				
		their influence on				
		behaviour and will emerge				
		as a better personalities				
		· The students will				*
		gain knowledge about				
		note taking writing skills				
		oral presentation skills.				
		field diary and lab record.				
		indexing footnote and				
		hibliographic procedures				
		· The students also				*
		know about reading and				
		comprehension of general				
		and technical articles				
		precise writing				
		summarizing, abstracting.				
		B,B,B,				

		individual and group presentations					
18 ERG	Renewable Energy	· The students will	*				
211	and Green Technology	understand the renewable sources like solar energy, wind energy and biochemical energy					
		• Students gain practical knowledge about solar PV system, solar cooker, solar water heater and solar dryer		*			
		• Students know the construction of biogas plant and their performance evaluation		*	*		
18 HOR 202	Production Technology for Fruit and Plantation Crops	• The students will learn about latest production technology of Major and minor fruit crops.	*	*	*	*	
		• The students will learn about latest production technology for plantation crops.	*	*	*	*	
18 PAT 201	Principles of Integrated Pest and Disease Management	• Students will be able to comprehend the principles underlying	*				

		integrated Pest and disease management.						
		• The students understand concept of ETL and EIL						
		• Students acquire knowledge about the plant and host relationship and their management						*
		• They get knowledge about the integrated management of plant diseases and pest.	*					*
18 SAC 201	Problematic Soils and their Management	• Studying about soil quality, soil physical and chemical constraints, wastelands and land use classification.	*	*				
		• Studying irrigation water quality.	*				*	
		• Studying the application of remote sensing and GIS in problem soil management		*			*	
		• Studying the type of problematic soils and their management practices, soil water quality parameters, application of remote sensing technology		*		*		*

			in agriculture and to							
			mitigate pollutions.							l
										l
										l
										l
										l
										l
	18 SST 201	Principles of Seed	• The Students will	*						
		Technology	gain Knowledge about the							l
			various techniques of							l
			quality seed production.							l
			• The student also	*			*			
			know about processing							l
			and seed quality							
			enhancement.							
V	18 GPB	Crop Improvement	• The student will	*	*				*	
	301	- I (Kharif Crops)	learn about basic concepts							
			of classical, wild species							l
			methodologies employed							l
			for Kharif crops and							
			current trends in plant							l
			breeding will be exposed.							l
			• The students will	*	*		*			
			gain knowledge on floral							l
			biology of different field							
			crops and their crossing							
			hybridization techniques							
	18 AGR	Rainfed Agriculture	· Students learn to	*				*	*	
	301	& Watershed	motivate the farmers for							
		Management	the adaption of improved							l
		_	agricultural practices for							l
			enhancement of crop							l
			production							l

									_
		• Students also learn	*						
		about the productivity							
		under rainfed areas							
		• They learn to adapt	*			*			
		new irrigation systems by							
		using less water under							
		adverse climatic							
		conditions.							
18 AGR	Practical Crop	· Students can learn	*	*			*		
302	Production - I	about cultivation of crops							
	(Kharif Crops)	in the field with practical							
	· • • •	exposure							
		• Students can gain	*					*	
		knowledge on working							
		out cost of cultivation and							
		BCR							
		· Learning all farm	*				*		
		activities field							
		management and to gain							
		maximum knowledge							
		about crops of a particular							
		season							
18 AEN	Pests of Crops and	· Identifying the	*	*					
301	Stored Grain and	major pests and their							
	their Management -	symptoms, biology and							
	Ι	host range of Field and							
		Horticulture Crops							
		· Understanding		*			*		
		important management							
		practices of insect pest							
		and non insect pests							
		· Students learn		*					
		about the nature of							
		1							

		damages caused by the insect pest						
18 AEX 301	Entrepreneurship Development and Business Communication	 The students will be familiarized with Entrepreneurship, Agri- premiership, Organizational Skills and Supply Chain Management. 	*		*	*	*	*
		• The students gain knowledge in Project Formulation, Project report preparation, Evaluation and Process of Supply Chain Management.			*	*		*
		• The students will gain knowledge about analyze the selected enterprises in terms of their management process and functions through study visits develop the skills of an effective manager through simulated exercises on communication skills.	*					
18 HOR 301	Production Technology for Ornamental Crops, MAP and Landscaping	• The students will be familiarized on Production technology and comprehensive knowledge on cut and loose flowers,	*	*				

r						 -			
			Medicinal and Aromatic						
			crops respectively						
			• The students will be	*	*				
			equipped with basic						
			concepts of Landscape						
			design						
			• The students will be		*	*		*	*
			able to undertake						
			commercial cultivation of						
			flower crop, medicinal						
			and aromatic plants.						
			Students will gain		*			*	
			knowledge to establish						
			different types garden in						
	10 047 202	D' (E' 11	various locations.	-	ala.		ala.	-1-	
	18 PAI 302	Diseases of Field	• Understanding the	*	*		*	*	
		and Horticultural	basic symptoms of						
		Crops and their	diseases cereal, Millets,						
		Management - I	Off seeds, Pulses and cash						
			Crops	*	*		*	*	
			hasia sumptoms of						
			discusses Emuits and						
			vegetable crops						
	18 \$40	Manures Fertilizers	· Studying about	*					
	301	and Soil Fertility	organic manures and						
	501	Management	preparation techniques of						
			organic manures						
			organic manures			1			

		• Studying the types of chemical Fertilizers	*					
		• Studying about soil fertility and plant		*				
		nutrition, nutrient						
		transformation and						
		fertility evaluation.						
		· The students		*		*	*	
		acquire knowledge on the						
		aspects of soil fertility						
		management and to						
		diagnose tailor made						
		fertilizer						
		recommendations for						
		crops.						
18 IPR 301	Intellectual Property	• To learn about the			*			*
	Rights	intellectual property						
		rights, patents, legislation						
		and Acts						
		• The students gain						*
		the knowledge about						
		GATT, WTO, TRIPs and						
		WIPO; Treaties for IPR						
		protection: Madrid						
		protocol, Berne						
		Convention, Budapest						
		treaty, etc.;						

			. The student will				*	
			1 he student will					
			learn the types of					
			Intellectual Property and					
			legislations covering IPR					
			in India: Patents,					
			Copyrights, Trademark,					
			Industrial design,					
			Geographical indications,					
			Integrated circuits, Trade					
			secrets.					
			• The students will				*	
			gain the knowledge of the					
			Patent system in India.					
			patentability, process and					
			product patent, filing of					
			natent natent					
			specification patent					
			claims Patent opposition					
			and revocation					
			infringement Compulsery					
			line Detect					
			licensing, Patent					
			Cooperation Treaty, Patent					
			search and patent					
			database.					
VI	18 AGR	Geoinformatics and	· Introducing	*	*		*	
	303	Nano-technology	precision agriculture to					
		and Precision	the students, geo-					
		Farming	informatics and geospatial					
			technologies as a modern					
			tool for precision					
			agriculture and crop					
			growth improvement in					
			agriculture					

		• Studying the					*	*	
		concepts and applications							
		of remote sensing and							
		image processing in							
		agriculture							
		• Understanding the	*						
		concepts of							
		nanotechnology							
		· Students know	*				*		
		about the economic and							
		environmental feasibility							
		of the precision farming							
		technology							
18 GPB	Crop Improvement	· The student will	*	*		 		*	
302	- II (Rabi Crops)	learn about basic concepts							
502	ii (itaoi ereps)	of classical wild species							
		methodologies employed							
		for rabi crops and current							
		trends in plant breeding							
		will be exposed.							
		· The students will	*	*		 			
		gain knowledge on origin							
		floral biology							
		· Students acquire		*				*	
		knowledge in							
		emasculation and crossing							
		techniques of different							
		field crops and							
		horticulture crop							
		normeanaice erop.	1	1	1		1		

18 AGR	Practical Crop	• Each student will be	*	*			
304	Production - II	allotted a small crop					
	(Rabi Crops)	cafeteria and he / she will					
	· · · ·	do all field operations in					
		the allotted land from field					
		preparation to harvest and					
		processing.					
		• To gain better	*	*			
		knowledge about rabi					
		crops.					
		· Learning all farm	*	*	*		*
		activities field					
		management and to gain					
		maximum knowledge					
		about crops of a particular					
		season					
18 AGR	Principles of	· The Students	*				
305	Organic Farming	understand the					
		importance, Basic concept					
		Principles of organic					
		farming,					
		· The Students learn					*
		about the benefits of					
		Organic Farming					
		Certification process,					
		agencies and Future					
		possibilities of Organic					
		farming.					
		· Students learn		*			
		about promoting the usage					
		of natural products					

		• Students learn to		*				
		use the natural farm						
		resources produced within						
		the farm						
18 AEC	Farm Management,	• The students gained				*		
301	Production &	the knowledge about Farm						
	Resource	Management and business						
	Economics	analysis.						
		· Students will be			*			
		equipped with						
		management concepts and						
		management of common						
		resources.						
		• The students will	*					
		gain the knowledge on						
		principles of farm						
		management.						
18 AEN	Pest of Horticulture	• The students gain		*				
302	Crops and	knowledge on identifying						
	Management of	the major pests and their						
	Beneficial Insects	symptoms, biology and						
		host range of Horticulture						
		Crops						
		· They also					*	
		understand the important						
		management practices of						
		insect pest and non insect						
		pests.						
		• The students also					*	
		gain knowledge about						
		beneficial insects and their						
		usage.						

		· Students learn		*				
		about the nature of						1
		damages caused by the						1
		insect pest.						I
18 FSN 301	Principles of Food	• The students have	*					. <u></u>
	Science and	gained the knowledge						1
	Nutrition	about the Physical.						I
		chemical properties of						I
		foods and the role of						I
		Microbes in food						I
		processing and spoilage.						I
		· They have been	*			,		
		familiarized with methods						I
		of food preservation and						I
		the fundamentals of						I
		human Nutrition						I
		· The students learn					*	
		the definition						I
		alaggification high given						I
		classification, biological						I
		function and chemical and						I
		physical properties of						I
		major and micro nutrients.					<u> </u>	
		• The students will					*	I
		gain the knowledge of the						I
		fundamentals food						I
		microbiology and also						I
		learn the food safety and						I
		standards.						i i

302 Management and acquired knowledge on	
Value Addition of various postharvest	
Fruits and management technologies	
Vegetable on fruits and vegetables	
such as Jam, Jelly Candy	
and Squash.	
· Students are also * *	
gain knowledge on	
conventional and modern	
packaging methods.	
· The students will * * *	*
have complete knowledge	
on the post harvest	
handling, processing and	
packing systems of fruits	
and vegetables.	
18 PAT 302 Diseases of Field · Understanding the *	
and Horticultural basic symptoms of	
Crops and their diseases cereal, Millets,	
Management - II Oil seeds, Pulses and cash	
crops	
· Understanding the *	*
basic symptoms of	
diseases Fruits and	
vegetable crops	
Understanding important	
disease management	
methods in Fruits and	
vegetable crops	
· Acquiring *	*
knowledge about the	
pathogens and diseases in	

			both field and horticultural crops							
	18 PCA	Protected	• The students can	*	*		*			
	301	Cultivation and	learn to design green							
		Secondary	house based on crop and							
		Agriculture	environmental conditions.							
			· The students can	*	*	*	*			
			learn to handle							
			equipments used to							
			green house							
			· The students can				*		*	
			learn Engineering							
			properties of grains for							
			designing post harvest							
			equipments.							
			· The students can	*					*	
			learn the operation and							
			maintenance of dryers and							
			materials handling							
			equipments.							
VII	18 AEX	Rural Agricultural	• The students		*			*	*	
	401	Work Experience	identified the agricultural							
		and Agro-industrial	problems & farmers							
		Attachment (KAWE \mathcal{L}	problem.		*			*	*	
		a AIA)	agricultural research		~				~	
			centers local institution							
			interaction with research							
			scientist, conducting							
			different type of							

VIII	18 FYP	Production	experiment and demonstrations.	*					
V III	401/	Technology for	knowledge on Bioagents						
	18 EXP 402	Bioagents and	and biofertilizer						
		Biolertilizer	formulations and						
			application strategies						
			• At the end of this	*	*	*	*	*	*
			themselves be a						
			entrepreneur with the						
			knowledge on starting						
			biofertilizer unit and low						
			biofertilizer and Bioagents						
			production						
			• Students acquire	*	*	*	*	*	*
			preparation and cultural						
			practices in biopesticides						
			and biofertilizer						
			production						4
			• Students						*
			application strategies.						
			quality control and						
			marketing.						

	Seed Production	• The students will		*				*
	and Technology	gain knowledge about the						
	65	various techniques of						
		quality seed production.						
		· Students also know				*	*	
		about pre and post harvest						
		operation, processing and						
		seed quality enhancement						
	Mushroom	· Learning about the	*	*				
	Cultivatiuon	details of edible						
	Technology	mushroom						
		· Acquiring	*	*			*	
		knowledge about the						
		edible mushroom and						
		their cultivation						
		technology						
		· Acquired					*	
		knowledge about the						
		various disease and pests						
		that affect mushroom						
		during cultivation process						
		· To get knowledge		*				
		about the management of						
		the mushroom diseases						
		and various cultivation						
		techniques.						
	Soil, Plant, Water	• The students learn					*	
	and Seed Testing	about assessing the soil,						
		plant, water and seed						
		samples through various						
		methods						

		• The student know			*			
		about soil and water			1			
		sample collection			l	ľ		
		· They also gain			*		*	
		knowledge on			1			
		interpretation of analytical			1			
		results of collected			1			
		samples.			l	ľ		
		· They acquire			*		*	
		knowledge in issuing soil			1			
		health cards			l	ľ		
	Commercial	• The students gain	*			*		
	Beekeeping	knowledge about species			1			
		and communication in			1			
		honey bees.						
		• Students also know	*					
		about mass rearing and			1			
		production of honey bees.						
		• They also know					*	
		about method of			1			
		collection of bees wax,			1			
		pollen and marketing of			1			
		honey bee products.						
	Poultry Production	· Students gain			*	ľ	*	
	Technology	knowledge about poultry			1			
		housing and feeding			1			
		management.			<u> </u>			
		• They also study			1	*	*	
		about flock health,			1			
		processing and marketing.			<u> </u>			
		· Students acquire			*		*	
		knowledge on various			l	ľ		
					l	ľ		
					 1	, , , , , , , , , , , , , , , , , , ,	1 1	

		standards of broilers and						
		layers.						
	Commercial	· The students who		*	*	*	*	
	Horticulture	are undergoing this						
	monteunure	experiential learning will						
		have independent skill to						
		manage commercial						
		manage commercial						
		They know to			*		*	
		They know to						
		prepare a nursery and it						
		will create a sell						
		enterprising activity for						
		them.	ala	-				
	Floriculture and	· I he students who	*	*			*	
	Landscaping	are undergoing this						
		experiential learning about						
		identification and study						
		important commercial						
		varieties of the flowering						
		crops. Preparation of						
		ground and beds for						
		planting specific flower						
		crops.						
		· Students know		*	*		*	
		about layout of plots and						
		gardens, planning for						
		home gardens, landscape						
		gardens. Preparation and						
		execution of landscape						
		plants maintenance of						
		gardens and lawns.						

		• They know about accessories and containers for flower arrangements.		*					
		• Students also know about floral arrangement preparation of floral ornaments bouquets etc. Preparation of bottle gardens, terrarium etc.		*			*		
	Food Processing	• The students learn about the importance of food processing	*						
		• Students gain knowledge on instruments and methods used to process food.	*						
		• They also know about the marketing and package of processed food.	*				*		
	Agriculture Waste Management	• The students will gain independent skill to manage large quantity of solid waste through composting technology.		*		*			
		• They know how to prepare a project on solid waste management and it will create a self enterprising activity for the students.			*		*		
		• They also know				*		*	*
---------	--------------------	------------------------------	---	---	---	---	---	---	---
		about assessing nutritive							
		value of the compost and							
		national & international							
		standards for compost							
		quality.							
	Organic Production	· The Students	*						
	Technology	understand the Basic							
	0,	concept and Principles of							
		organic farming							
		• The Students learn		*				*	
		about the benefits of							
		Organic Production							
		· Student also learn		*		*	*		
		the importance of organic							
		food production.							
	Commercial	\cdot The students acquire		*			*		*
	Sericulture	knowledge about							
		mulberry production and							
		management							
		· They also know		*			*		*
		about silkworm rearing							
		and methods							
		· Students acquire		*			*	*	*
		knowledge about							
		mainfield preparation							
		manuring planting							
		methods training and							
		pruning of mulberry unto							
		harvest							
18 OPT	Agribusiness	· Students gain			*	*			*
301 18	Management	knowledge on							
501, 10	wianagement	Kilowicuge oli		1					

OPT 301, 18 OPT		agribusiness and its classification.						
302 – Elective course 3 (2+1)		• Students also learn about agri value chain, PRST and SWOT analysis.					*	
		• They also study about financial institutions, co operative and commercial banks.						*
	Agrochemicals	• The students understand the pesticide classification.	*					
		• The students know about the merits and demerits of pesticide and their uses in agriculture	*			*		
		• The students know about various agrochemicals and its usage in agricultural production	*					
	Commercial Plant Breeding	• The students will be thoroughly exposed about the application of Plant breeding	*					
		• The students learn basic knowledge about the hybrid seed production and plant Breeding techniques		*	*			*

		They also know		*					
		about the importance of							
		breeding in agriculture							
	Landscaping	· The student will		*		*			
		gain the knowledge about							
		layout of gardening,							
		characteristics of plants,							
		care and maintenance of							
		planting materials							
		• The students will be		*	*	*	*	*	
		familiarized on Production							
		technology and							
		comprehensive knowledge							
		on cut and loose flowers,							
		Medicinal and Aromatic							
		crops respectively							
		• The students will be			*				
		equipped with basic							
		concepts of Landscape							
		design							
	Food Safety Issues	• The students know	*						
		about the importance of							
		food safety.							
		• They know about	*					*	
		the assessment of food							
		safety and food laws and							
		standards ensuring food							
		quality.							

	Biopesticides &	• At the end of this		*	*	*		*
	Biofertilizers	course students will						
		themselves be a						
		entrepreneur with the						
		knowledge on starting						
		biofertilizer unit and low						
		low cost technologies in						
		biofertilizer and Bioagents						
		production						
		· Students acquire		*	*	*		*
		skills on low cost media						
		preparation and cultural						
		practices in biopesticides						
		and biofertilizer						
		production						
		· Students	*	*				*
		Understand the						
		application strategies,						
		quality control and						
		marketing.						
	Protected	· After completion of	*	*				*
	Cultivation	this course, the students						
		will learn in the field of						
		crop production in						
		protected environments						
		under given climatic and						
		economic, and technical						
		conditions.						
		· The students will	*	*				
		acquire knowledge and						
		skill on crop production.						
1	1	1	1	1	1			1

		• The students know	*	*					
		about developing skills in							
		erection of protected							
		structures and cultivation							
		of horticultural crops							
	Micro propagation	· The students will		*					*
	Technologies	gain hands on experience							
	i comio io gios	and Exposed to plant							
		tissue culture							
	Hi-tech	· After completion of	*	*		*		*	
	Horticulture	this course, the students							
	Homeunure	will be learned in the field							
		will be learned in the field							
		of crop production in							
		protected cultivation		-1-		-			
		· The students also	*	*				*	
		acquire knowledge about							
		precision farming							
		techniques.							
	Weed Management	• The students have		*				*	
		learned about the							
		Importance of Weed							
		management and							
		Herbicides.							
		• The students have		*					
		learnt above the types,							
		methods & techniques of							
		Weed management.							
	System Simulation	· Students gain		*			*	*	*
	and Agro-advisorv	knowledge on system							
		approach for representing							
		soil- plant- atmospheric							
		continuum cron models							
		and data requirements							
		and data requirements		1		1	1	1	

		· Students know	*		*	*	*
		about preparation of crop					
		calendars, yield and insect					
		& disease forecasting					
		models.					
		· Students also	*		*	*	*
		acquire knowledge about					
		statistical approaches on					
		meteorological data for					
		weather forecasting.					
	Agricultural	· Students will be					*
	Journalism	familiarized about the					
		journalism and					
		Newspapers.					
		· Students may able					
		to know about the					
		gathering Agricultural					
		related information's and					
		their presentations.					
		· The students also					*
		gain knowledge on					
		gathering Agricultural					
		Journalism, writing stories					
		and Editorial Mechanics.					