

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	Yellow
Regional need	Red
National need	Green
Global need	Blue



PRIST
DEEMED TO BE
UNIVERSITY
NAAC ACCREDITED
THANJAVUR – 613 403 - TAMILNADU

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 crops and 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 conserve it.
	18 AEX 101	Rural Sociology & Educational Psychology	· The students can learn the Rural Social situation, their Structure and Function for effective Agricultural Extension.

		<ul style="list-style-type: none"> The students may be motivated towards learning, personality and good behavior.
		<ul style="list-style-type: none"> The students will understand investigates the social, cultural, political and religious problems of rural society.
18 AEX 102	Human Values & Ethics (non gradial)	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Horticulture	<ul style="list-style-type: none"> 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 economy
18 SAC 101	Fundamentals of Soil Science	<ul style="list-style-type: none"> 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 chemistry, fertility and land use pattern.
18 BIC 101	Fundamentals of Plant Biochemistry and Biotechnology	<ul style="list-style-type: none"> The students will learn the fundamental 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 about the bio technology.

			<ul style="list-style-type: none"> 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 101	Comprehension & Communication Skills in English	<ul style="list-style-type: none"> The students are well equipped on Communication skills and handling of interviews. The students also know about grammatical knowledge
	18 NSS / NCC 101	NSS/NCC/Physical Education & Yoga Practices	<ul style="list-style-type: none"> Students will come to know basic knowledge on NSS,NCC programs, They also know about youth development program, Student gain knowledge on yoga, health, hygiene and sanitation
II	18 AGR 104	Introductory Agro-meteorology & Climate Change	<ul style="list-style-type: none"> The students will get acquainted with recent development in agro –meteorology with historical development of climate change.
			<ul style="list-style-type: none"> The students will study the important characterization of agricultural climate change.
			<ul style="list-style-type: none"> They study crop planning for prevailing climate for sustainable agriculture
			<ul style="list-style-type: none"> They study about crop management to various climate change and ways to mitigate it.
			<ul style="list-style-type: none"> They study about various instruments used in agro- meteorology.
	18 AEC 101	Fundamentals of Agricultural Economics	<ul style="list-style-type: none"> The students have been educated towards the principles, laws, production and macroeconomic concepts.
			<ul style="list-style-type: none"> The students will gain the knowledge on basic principles of economics including the problem of economic decision-making.
			<ul style="list-style-type: none"> Students will know about laws of economics and macroeconomic concepts.
	18 AEN 101	Fundamentals of Entomology	<ul style="list-style-type: none"> Know about arthropods and especially insects with their morphological features
<ul style="list-style-type: none"> Identify insects of economic importance and acquire working skills for collecting, mounting, and preserving insects 			
<ul style="list-style-type: none"> Know about pesticide classification and their formulations and maintenance of pesticide appliances 			

			<ul style="list-style-type: none"> 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 103	Fundamentals of Agricultural Extension Education		<ul style="list-style-type: none"> 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 AGM 101	Agricultural Microbiology		<ul style="list-style-type: none"> 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 GPB 102	Fundamentals of Genetics		<ul style="list-style-type: none"> 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 organelles.
18 CRP 101	Fundamentals of Crop Physiology		<ul style="list-style-type: none"> The students will learn about the basic concepts and application of crop physiology.
18 PAT 101	Fundamentals of Plant Pathology		<ul style="list-style-type: none"> Understanding the 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 101	Soil and Water Conservation Engineering		<ul style="list-style-type: none"> The students can learn different types of erosion due to water and wind.

			<ul style="list-style-type: none"> 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 201	Crop Production Technology - I (Kharif Crops)	<ul style="list-style-type: none"> Students can learn about the Crop classification and cultivation practices of various crops grown under kharif season
			<ul style="list-style-type: none"> Students can gain practical knowledge on raising of nursery and recording bio- metric observation and working of cost of cultivation for various crops
			<ul style="list-style-type: none"> Students learn to identify the development and application of advances in sciences which leads to the production of healthy food.
			<ul style="list-style-type: none"> To develop cropping system for food and value added products which are compatible 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 Co-operation, and farm financial analyses.
	18 AMP 201	Livestock and Poultry Management	<ul style="list-style-type: none"> The students have learned about basic knowledge on how to manage and operate livestock and poultry farms

			<ul style="list-style-type: none"> 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 201	Environmental Studies and Disaster Management		<ul style="list-style-type: none"> Students learn about ecosystems, 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.
18 FMP 201	Farm Machinery and Power		<ul style="list-style-type: none"> 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.
18 GPB 201	Fundamentals of Plant Breeding		<ul style="list-style-type: none"> 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 Technology for Vegetables and Spices		<ul style="list-style-type: none"> 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
			· Solve problems using appropriate 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 of cost of cultivation for various rabi crops
			· 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	<ul style="list-style-type: none"> The students have been equipped with better marketing strategies and to handle it in a better way.
		<ul style="list-style-type: none"> They know better about marketing functions and trade concepts.
		<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> The students will be familiarized with various communication skills.
		<ul style="list-style-type: none"> They will develop as a better professionals with inter personal skills.
		<ul style="list-style-type: none"> They will develop problem solving skills and their influence on behaviour and will emerge as a better personalities.
		<ul style="list-style-type: none"> The students will gain knowledge about note taking, writing skills, oral presentation skills; field diary and lab record; indexing, footnote and bibliographic procedures.
		<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> The students will understand the renewable sources like solar energy, wind energy and biochemical energy
		<ul style="list-style-type: none"> Students gain practical knowledge about solar PV system, solar cooker, solar water heater and solar dryer
		<ul style="list-style-type: none"> Students know the construction of biogas plant and their performance evaluation
18 HOR 202	Production Technology for Fruit and Plantation Crops	<ul style="list-style-type: none"> The students will learn about latest production technology of Major and minor fruit crops.
		<ul style="list-style-type: none"> The students will learn about latest production technology for plantation crops.
18 PAT 201	Principles of Integrated Pest and Disease Management	<ul style="list-style-type: none"> Students will be able to comprehend the principles underlying integrated Pest and disease management.
		<ul style="list-style-type: none"> The students understand concept of ETL and EIL
		<ul style="list-style-type: none"> Students acquire knowledge about the plant and host relationship and their management
		<ul style="list-style-type: none"> They get knowledge about the integrated management of plant diseases and pest.

	18 SAC 201	Problematic Soils and their Management	<ul style="list-style-type: none"> · 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. 	
	18 SST 201	Principles of Seed Technology	<ul style="list-style-type: none"> · 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)	<ul style="list-style-type: none"> · 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	<ul style="list-style-type: none"> · 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)	<ul style="list-style-type: none"> · 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	<ul style="list-style-type: none"> · 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 	

			<ul style="list-style-type: none"> Students learn about the nature of damages caused by the insect pest
18 AEX 301	Entrepreneurship Development and Business Communication		<ul style="list-style-type: none"> The students will be familiarized with Entrepreneurship, Agri-premiership, Organizational Skills and Supply Chain Management.
			<ul style="list-style-type: none"> The students gain knowledge in Project Formulation, Project report preparation, Evaluation and Process of Supply Chain Management.
			<ul style="list-style-type: none"> 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		<ul style="list-style-type: none"> The students will be familiarized on Production technology and comprehensive knowledge on cut and loose flowers, Medicinal and Aromatic crops respectively
			<ul style="list-style-type: none"> The students will be equipped with basic concepts of Landscape design
			<ul style="list-style-type: none"> The students will be able to undertake commercial cultivation of flower crop, medicinal and aromatic plants.
			<ul style="list-style-type: none"> 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		<ul style="list-style-type: none"> Understanding the basic symptoms of diseases cereal, Millets, Oil seeds, Pulses and cash crops
			<ul style="list-style-type: none"> Understanding the basic symptoms of diseases Fruits and vegetable crops
18 SAC 301	Manures, Fertilizers and Soil Fertility Management		<ul style="list-style-type: none"> Studying about organic manures and preparation techniques of organic manures
			<ul style="list-style-type: none"> Studying the types of chemical Fertilizers
			<ul style="list-style-type: none"> Studying about soil fertility and plant nutrition, nutrient transformation and fertility evaluation.
			<ul style="list-style-type: none"> 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		<ul style="list-style-type: none"> To learn about the intellectual property rights, patents, legislation and Acts

			<ul style="list-style-type: none"> The students gain the knowledge about GATT, WTO, TRIPs and WIPO; Treaties for IPR protection: Madrid protocol, Berne Convention, Budapest treaty, etc.;
			<ul style="list-style-type: none"> 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.
			<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Introducing precision agriculture to the students, geo-informatics and geospatial technologies as a modern tool for precision agriculture and crop growth improvement in agriculture
			<ul style="list-style-type: none"> Studying the concepts and applications of remote sensing and image processing in agriculture
			<ul style="list-style-type: none"> Understanding the concepts of nanotechnology
			<ul style="list-style-type: none"> Students know about the economic and environmental feasibility of the precision farming technology.
18 GPB 302	Crop Improvement - II (Rabi Crops)	<ul style="list-style-type: none"> 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. 	
		<ul style="list-style-type: none"> The students will gain knowledge on origin, floral biology. 	
		<ul style="list-style-type: none"> Students acquire knowledge in emasculatation and crossing techniques of different field crops and horticulture crop. 	
18 AGR 304	Practical Crop Production - II (Rabi Crops)	<ul style="list-style-type: none"> 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. 	

		<ul style="list-style-type: none"> 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 305	Principles of Organic Farming	<ul style="list-style-type: none"> 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 resources produced within the farm
18 AEC 301	Farm Management, Production & Resource Economics	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 damages caused by the insect pest.
18 FSN 301	Principles of Food Science and Nutrition	<ul style="list-style-type: none"> 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.

			<ul style="list-style-type: none"> The students will gain the knowledge of the fundamentals food microbiology and also learn the food safety and standards.
	18 HOR 302	Post-Harvest Management and Value Addition of Fruits and Vegetable	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 (RAWA & AIA)	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Gain experimental knowledge on Bioagents and biofertilizer production methodologies, formulations and application strategies

	18 EXP 402		<ul style="list-style-type: none"> 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
			<ul style="list-style-type: none"> Students acquire skills on low cost media preparation and cultural practices in biopesticides and biofertilizer production
			<ul style="list-style-type: none"> Students Understand the application strategies, quality control and marketing.
		Seed Production and Technology	<ul style="list-style-type: none"> The students will gain knowledge about the various techniques of quality seed production.
			<ul style="list-style-type: none"> Students also know about pre and post harvest operation, processing and seed quality enhancement
		Mushroom Cultivatiuon Technology	<ul style="list-style-type: none"> Learning about the details of edible mushroom
			<ul style="list-style-type: none"> Acquiring knowledge about the edible mushroom and their cultivation technology
			<ul style="list-style-type: none"> Acquired knowledge about the various disease and pests that affect mushroom during cultivation process
			<ul style="list-style-type: none"> To get knowledge about the management of the mushroom diseases and various cultivation techniques.
		Soil, Plant, Water and Seed Testing	<ul style="list-style-type: none"> The students learn about assessing the soil, plant, water and seed samples through various methods
			<ul style="list-style-type: none"> The student know about soil and water sample collection
			<ul style="list-style-type: none"> They also gain knowledge on interpretation of analytical results of collected samples.
			<ul style="list-style-type: none"> They acquire knowledge in issuing soil health cards
		Commercial Beekeeping	<ul style="list-style-type: none"> The students gain knowledge about species and communication in honey bees.
			<ul style="list-style-type: none"> Students also know about mass rearing and production of honey bees.
		<ul style="list-style-type: none"> They also know about method of collection of bees wax, pollen and marketing of honey bee products. 	

		Poultry Production Technology	<ul style="list-style-type: none"> Students gain knowledge about poultry housing and feeding management.
			<ul style="list-style-type: none"> They also study about flock health, processing and marketing.
			<ul style="list-style-type: none"> Students acquire knowledge on various standards of broilers and layers.
		Commercial Horticulture	<ul style="list-style-type: none"> The students who are undergoing this experiential learning will have independent skill to manage commercial nursery.
			<ul style="list-style-type: none"> They know to prepare a nursery and it will create a self enterprising activity for them.
		Floriculture and Landscaping	<ul style="list-style-type: none"> 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.
			<ul style="list-style-type: none"> 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.
			<ul style="list-style-type: none"> They know about accessories and containers for flower arrangements.
			<ul style="list-style-type: none"> Students also know about floral arrangement preparation of floral ornaments bouquets etc. Preparation of bottle gardens, terrarium etc.
		Food Processing	<ul style="list-style-type: none"> The students learn about the importance of food processing
			<ul style="list-style-type: none"> Students gain knowledge on instruments and methods used to process food.
			<ul style="list-style-type: none"> They also know about the marketing and package of processed food.
		Agriculture Waste Management	<ul style="list-style-type: none"> The students will gain independent skill to manage large quantity of solid waste through composting technology.
			<ul style="list-style-type: none"> They know how to prepare a project on solid waste management and it will create a self enterprising activity for the students.
<ul style="list-style-type: none"> They also know about assessing nutritive value of the compost and national & international standards for compost quality. 			
	Organic Production Technology	<ul style="list-style-type: none"> The Students understand the Basic concept and Principles of organic farming 	

			<ul style="list-style-type: none"> · The Students learn about the benefits of Organic Production
			<ul style="list-style-type: none"> · Student also learn the importance of organic food production.
		Commercial Sericulture	<ul style="list-style-type: none"> · The students acquire knowledge about mulberry production and management
			<ul style="list-style-type: none"> · They also know about silkworm rearing and methods
			<ul style="list-style-type: none"> · Students acquire knowledge about mainfield preparation manuring, planting methods, training and pruning of mulberry upto harvest.

SEMESTER	COURSE CODE	COURSE TITLE	CO'S
	18 OPT	Agri business management	<ul style="list-style-type: none"> To acquired the learner with meaning and concepts of management and organizational behavior Students get the concept processes, significance and role of management and organizational behavior
		Agro chemicals	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> To expose the student to basic and applied principles of plant breeding To import knowledge on breeding methods of self, cross and clonally propagated crops
		Landscaping	<ul style="list-style-type: none"> 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 completing design projects
		Food safety issues	<ul style="list-style-type: none"> Identify the characteristics of potentially hazardous food. Identify the dangers of food borne illness
		Bio pesticides and bio fertilizers	<p>Ability to understand formulation and large-scale industrial production of bio fertilizers.</p> <p>To gain knowledge eco friendly agricultural inputs so as to nullify the ill effects of fertilizer</p>
		Protected cultivation	Student get knowledge about that crops are grown in an environment free from harmful external factor like pest, disease and extreme weather.

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

SCHOOL OF AGRICULTURE

1.1.1

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

7	18UGAGRGE	18 HOR 101	Fundamentals of Horticulture	Unit I – soil and climate for horticultural crops Unit – IV – Lawn making , selection of grasses			Unit V- use of plant growth regulators
8	18UGAGRGE	18 SAC 101	Fundamentals of Soil Science	Unit I Pedological and edaphological concepts of soil; Unit V Soil pollution - behaviour of pesticides and inorganic contaminants, prevention and mitigation of soil pollution.	Unit I Pedological and edaphological concepts of soil; Unit V Soil pollution - behaviour of pesticides and inorganic contaminants, prevention and mitigation of soil pollution.	Unit I Pedological and edaphological concepts of soil; Unit V Soil pollution - behaviour of pesticides and inorganic contaminants, prevention and mitigation of soil pollution.	Unit I Pedological and edaphological concepts of soil; Unit V Soil pollution - behaviour of pesticides and inorganic contaminants, prevention and mitigation of soil pollution.
9	18UGAGRGE	18 BIC 101	Fundamentals of Plant Biochemistry and Biotechnology	Unit III Metabolism of carbohydrates - Glycolysis, TCA cycle., Unit V - Cryo-preservation - Introduction to recombinant DNA methods - Physical (Biotechnology regulations.	Unit III Metabolism of carbohydrates - Glycolysis, TCA cycle, Glyoxylate cycle, Unit V - Cryo-preservation - Introduction to recombinant DNA methods - Physical Biotechnology regulations.	Unit III Metabolism of carbohydrates - Glycolysis, TCA cycle, Glyoxylate cycle, Unit V - Cryo-preservation - Introduction to recombinant DNA methods - Physical Biotechnology regulations.	
10	18UGAGRGE	18 ENG 101	Comprehension & Communication Skills in English	Unit III Business correspondence Unit V Interviews	Unit III Business correspondence Unit V Interviews	Unit III Business correspondence Unit V Interviews	Unit III Business correspondence Unit V Interviews
11	18UGAGRGE	18 NSS /NCC 101	NSS/NCC/Physical Education & Yoga Practices	Unit II Volunteerism and shramdan, Citizenship, constitution and human rights Unit IV Health, hygiene and sanitation,	Unit II Volunteerism and shramdan, Citizenship, constitution and human rights Unit IV Health, hygiene and sanitation,	Unit II Volunteerism and shramdan, Citizenship, constitution and human rights Unit IV Health, hygiene and sanitation,	Unit II Volunteerism and shramdan, Citizenship, constitution and human rights Unit IV Health, hygiene and sanitation,

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

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

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

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

				Organizing seminars and conferences	Organizing seminars and conferences	Organizing seminars and conferences	Organizing seminars and conferences
37	18UGAGRGE	18 ERG 211	Renewable Energy and Green Technology	Unit III- Solar energy and application, Unit IV - wind energy & windmill Unit V- Bio fuels	Unit III- Solar energy and application, Unit IV - wind energy & windmill Unit V- Bio fuels	Unit III- Solar energy and application, Unit IV - wind energy & windmill Unit V- Bio fuels	Unit III- Solar energy and application, Unit IV - wind energy & windmill Unit V- Bio fuels
38	18UGAGRGE	18 HOR 202	Production Technology for Fruit and Plantation Crops	Unit – I Physiological disorders of banana, Sucker treatment	Unit – I Physiological disorders of banana, Sucker treatment	Unit – I Physiological disorders of Fruits, Sucker treatment, Production technology of plantation crops	Unit – I Physiological disorders of Fruits, Sucker treatment, Production technology of plantation crops
39	18UGAGRGE	18 PAT 201	Principles of Integrated Pest and Disease Management	Unit III Survey, surveillance and forecasting of Insect pest and diseases. Unit IV Safety issues in pesticide uses. Political, social and legal implication of IPM.	Unit III Survey, surveillance and forecasting of Insect pest and diseases. Unit IV Safety issues in pesticide uses. Political, social and legal implication of IPM.	Unit III Survey, surveillance and forecasting of Insect pest and diseases. Unit IV Safety issues in pesticide uses. Political, social and legal implication of IPM.	Unit III Survey, surveillance and forecasting of Insect pest and diseases. Unit IV Safety issues in pesticide uses. Political, social and legal implication of IPM.
40	18UGAGRGE	18 SAC 201	Problematic Soils and their Management	Unit – I Different types of problematic soils, agro eco systems Unit – II sodic soils, acid soils, soil pollution Unit – III Taxonomic classification of soils	Unit – I Different types of problematic soils, agro eco systems Unit – II sodic soils, acid soils, soil pollution Unit – III Taxonomic classification of soils	Unit – I Different types of problematic soils, agro eco systems Unit – II sodic soils, acid soils, soil pollution Unit – III Taxonomic classification of soils	Unit – I Different types of problematic soils, agro eco systems Unit – II sodic soils, acid soils, soil pollution Unit – III Taxonomic classification of soils
41	18UGAGRGE	18 SST 201	Principles of Seed Technology	Unit II - Seed production,III- Post harvest handling of seeds; Unit IV-Seed	Unit II - Seed production,III- Post harvest handling of seeds; Unit IV-Seed	Unit II - Seed production,III- Post harvest handling of seeds; Unit IV-Seed	Unit II - Seed production,III- Post harvest handling of seeds; 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 - I (Kharif Crops)	UNIT I center of origin Unit III- concepts of breeding self and cross pollination	UNIT I center of origin Unit III- concepts of breeding self and cross pollination	UNIT I center of origin Unit III- concepts of 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 pollination	UNIT I center of origin Unit III- concepts of breeding self and cross pollination		
53	18UGAGRGE	18 AGR 304	Practical Crop Production - II (Rabi 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
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	18UGAGRGE	18 AEX 401	Rural Agricultural Work Experience and Agro-industrial Attachment (RAW & AIA)	Village attachment programme, research station attachment programame, agro industrial attachment	agro industrial attachment	agro industrial attachment	
62	18UGAGRGE	18 PRJ 401	Project Report Preparation, Presentation and Evaluation	*	*		
63	18UGAGRGE	18 EXP	Production Technology for Bioagents and Biofertilizer	Unit – I Production technology of Azolla, Bio fertilizer, vermicompost	Unit – I Production technology of Azolla	Unit – I Production technology of Azolla	Unit – I Production technology of Azolla
64	18UGAGRGE	18 EXP	Seed Production and Technology	Unit III - Seed crop management and hybrid seed production techniques Unit V - Seed testing and marketing	Unit III - Seed crop management and hybrid seed production techniques Unit V - Seed testing and marketing	Unit III - Seed crop management and hybrid seed production techniques Unit V - Seed testing and marketing	Unit III - Seed crop management and hybrid seed production techniques Unit V - Seed testing and marketing
65	18UGAGRGE	18 EXP	Mushroom Cultivatiuon Technology	Unit 1 : Different types of mushroom , Morphology Unit 3 : Problems in cultivation of mushroom Unit 4 : Post harvest technology	Unit 1 : Different types of mushroom , Morphology Unit 3 : Problems in cultivation of mushroom Unit 4 : Post harvest technology	Unit 1 : Different types of mushroom , Morphology Unit 3 : Problems in cultivation of mushroom Unit 4 : Post harvest technology	Unit 1 : Different types of mushroom , Morphology Unit 3 : Problems in cultivation of mushroom Unit 4 : Post harvest technology
66	18UGAGRGE	18 EXP	Soil, Plant, Water and Seed Testing	1. Assessment of soil physical and chemical quality indices of collected soil samples4. Assessment of soil biological quality indices and	1. Assessment of soil physical and chemical quality indices of collected soil samples4. Assessment of soil biological quality indices and	1. Assessment of soil physical and chemical quality indices of collected soil samples4. Assessment of soil biological quality indices and	1. Assessment of soil physical and chemical quality indices of collected soil samples4. Assessment of soil biological quality indices 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 fixtures, Green wall Unit 1 : Different types of mushroom , Morphology Unit 3 :	Unit 1 : Different types of mushroom , Morphology Unit 3 : Problems in cultivation of mushroom Unit 4 : Post harvest technology

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



SCHOOL OF AGRICULTURE

2018 REGULATION

Sem	Course code	Course title	CO's	PO's							
				PO1	PO2	PO3	PO4	PO5	PO6	PO7	
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 conserve it.							
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 problems of rural society.				*				
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 Horticulture	· 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 economy	*						

	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 chemistry, fertility and land use pattern.						*		
	18 BIC 101	Fundamentals of Plant Biochemistry and Biotechnology	· The students will learn the fundamental 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 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 101	Comprehension & Communication Skills in English	· The students are well equipped on Communication skills and handling of 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 program,							*
			· Student gain knowledge on yoga, health, hygiene and sanitation							
II	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.	*	*					

			<ul style="list-style-type: none"> The students will study the important characterization of agricultural climate change. 		*				*	
			<ul style="list-style-type: none"> They study crop planning for prevailing climate for sustainable agriculture 		*				*	
			<ul style="list-style-type: none"> They study about crop management to various climate change and ways to mitigate it. 		*				*	
			<ul style="list-style-type: none"> They study about various instruments used in agro- meteorology. 	*					*	
	18 AEC 101	Fundamentals of Agricultural Economics	<ul style="list-style-type: none"> The students have been educated towards the principles, laws, production and macroeconomic concepts. 	*						
			<ul style="list-style-type: none"> The students will gain the knowledge on basic principles of economics including the problem of economic decision-making. 	*				*	*	
			<ul style="list-style-type: none"> Students will know about laws of economics and macroeconomic concepts. 	*					*	

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	*	*				*	
		· 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 103	Fundamentals of Agricultural Extension Education	· 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 AGM 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 GPB 102	Fundamentals of Genetics	<ul style="list-style-type: none"> · Basic principles of inheritance and modern concepts of genetics will be exposed to student 	*						
			<ul style="list-style-type: none"> · The students know about genetics principles and their application, ultra structure of cell and cell organelles. 					*		
	18 CRP 101	Fundamentals of Crop Physiology	<ul style="list-style-type: none"> · The students will learn about the basic concepts and application of crop physiology. 	*	*			*		
	18 PAT 101	Fundamentals of Plant Pathology	<ul style="list-style-type: none"> · Understanding the Development and History of plant pathology 	*						
			<ul style="list-style-type: none"> · Understanding Terms, Concepts and Classification of plant Diseases 							
			<ul style="list-style-type: none"> · Learning about the pathogens, plant pathology history & their impacts in the environment 	*					*	
			<ul style="list-style-type: none"> · Understanding the important disease causing agents and their basic symptoms 	*					*	
18 SWE 101	Soil and Water Conservation Engineering	<ul style="list-style-type: none"> · The students can learn different types of erosion due to water and wind. 	*							

			<ul style="list-style-type: none"> The students can learn different types of gully control structures and its suitability 							
			<ul style="list-style-type: none"> The students can learn to estimate soil loss by using USLE. 		*				*	
			<ul style="list-style-type: none"> The students can learn the control methods of soil erosion. 		*				*	
III	18 AGR 201	Crop Production Technology - I (Kharif Crops)	<ul style="list-style-type: none"> Students can learn about the Crop classification and cultivation practices of various crops grown under kharif season 	*	*				*	
			<ul style="list-style-type: none"> Students can gain practical knowledge on raising of nursery and recording bio- metric observation and working of cost of cultivation for various crops 	*	*			*	*	
			<ul style="list-style-type: none"> 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 compatible 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 Co-operation, 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	*							
			· 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 201	Environmental Studies and Disaster Management		· Students learn about ecosystems, pollution and other problems related to environment	*							
			· Students learn about types of disasters and its management						*		

		<ul style="list-style-type: none"> The students will gain the knowledge of the ecosystems, Food chains, food webs and ecological pyramids. 	*							
		<ul style="list-style-type: none"> The students learn the classification, biological function of natural resources. 	*					*		
18 FMP 201	Farm Machinery and Power	<ul style="list-style-type: none"> The students can get practical knowledge in operation and maintenance of tractor, power tillage, sprayer, reaper and multi crop thresher. 	*				*	*		
		<ul style="list-style-type: none"> The students can learn in selection of suitable farm equipment for tillage to harvest based on field and crop conditions. 	*				*	*		
		<ul style="list-style-type: none"> 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.	*			*	*	*		
18 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					*	*	*		
18 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.	*	*			*	*			

			<ul style="list-style-type: none"> 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								*	
		<ul style="list-style-type: none"> Learn the basic concept of Computer and Internet 									
		<ul style="list-style-type: none"> Create document in MS Word 									
		<ul style="list-style-type: none"> Do the Statistical Calculations and draw the chart using MS Excel 									
		<ul style="list-style-type: none"> Design Presentation using MS Powerpoint 								*	
		<ul style="list-style-type: none"> Apply ICT for Agriculture activities 								*	
18 MAT 201	Statistical Methods	Upon completion of the course, the students will be able to:						*			
		<ul style="list-style-type: none"> Be familiar with basic concepts and terms 									
		<ul style="list-style-type: none"> Solve problems using appropriate 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 of cost of cultivation for various rabi crops	*	*			*			

			· 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.		*						*	

			<ul style="list-style-type: none"> 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		<ul style="list-style-type: none"> The students will be familiarized with various communication skills. 									
			<ul style="list-style-type: none"> They will develop as a better professionals with inter personal skills. 							*		
			<ul style="list-style-type: none"> They will develop problem solving skills and their influence on behaviour and will emerge as a better personalities. 							*		
			<ul style="list-style-type: none"> The students will gain knowledge about note taking, writing skills, oral presentation skills; field diary and lab record; indexing, footnote and bibliographic procedures. 							*		
			<ul style="list-style-type: none"> 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.	*					*		
			· 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.								
	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	*					*	*	

		<ul style="list-style-type: none"> Students also learn about the productivity under rainfed areas 	*							
		<ul style="list-style-type: none"> They learn to adapt new irrigation systems by using less water under adverse climatic conditions. 	*				*			
18 AGR 302	Practical Crop Production - I (Kharif Crops)	<ul style="list-style-type: none"> Students can learn about cultivation of crops in the field with practical exposure 	*	*				*		
		<ul style="list-style-type: none"> Students can gain knowledge on working out cost of cultivation and BCR 	*					*		
		<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Identifying the major pests and their symptoms, biology and host range of Field and Horticulture Crops 	*	*						
		<ul style="list-style-type: none"> Understanding important management practices of insect pest and non insect pests 		*				*		
		<ul style="list-style-type: none"> Students learn about the nature of 		*						

			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,	*	*							

			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	*							

			<ul style="list-style-type: none"> 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. 						*		
			<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Introducing precision agriculture to the students, geoinformatics and geospatial technologies as a modern tool for precision agriculture and crop growth improvement in agriculture 	*	*				*		

		<ul style="list-style-type: none"> Studying the concepts and applications of remote sensing and image processing in agriculture 						*	*	
		<ul style="list-style-type: none"> Understanding the concepts of nanotechnology 	*							
		<ul style="list-style-type: none"> Students know about the economic and environmental feasibility of the precision farming technology. 	*					*		
18 GPB 302	Crop Improvement - II (Rabi Crops)	<ul style="list-style-type: none"> 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. 	*	*					*	
		<ul style="list-style-type: none"> The students will gain knowledge on origin, floral biology. 	*	*						
		<ul style="list-style-type: none"> Students acquire knowledge in emasculation and crossing techniques of different field crops and horticulture crop. 		*						*

			· Students learn about the nature of damages caused by the insect pest.		*							
18 FSN 301	Principles of Food Science and Nutrition		· 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.						*			
			· The students will gain the knowledge of the fundamentals food microbiology and also learn the food safety and standards.						*			

18 HOR 302	Post-Harvest Management and Value Addition of Fruits and Vegetable	· 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 (RAWA & 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/ 18 EXP 402	Production Technology for Bioagents and Biofertilizer	· Gain experimental knowledge on Bioagents and biofertilizer production methodologies, formulations and application strategies		*						
			· 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.		*					*	
			· Students also know about pre and post 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					*			
			· They also gain knowledge on 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 broilers 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.		*			*	*	*	
	18 OPT 301, 18	Agribusiness Management	· Students gain knowledge on			*	*			*	

			· 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 & Biofertilizers	<ul style="list-style-type: none"> 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 		*	*	*			*	
			<ul style="list-style-type: none"> Students acquire skills on low cost media preparation and cultural practices in biopesticides and biofertilizer production 		*	*	*			*	
			<ul style="list-style-type: none"> Students Understand the application strategies, quality control and marketing. 	*	*					*	
		Protected Cultivation	<ul style="list-style-type: none"> After completion of this course, the students will learn in the field of crop production in protected environments under given climatic and economic, and technical conditions. 	*	*					*	
			<ul style="list-style-type: none"> The students will acquire knowledge and skill on crop production. 	*	*						

			· The students know about developing skills in erection of protected structures and cultivation of horticultural crops	*	*						
		Micro propagation Technologies	· The students will gain hands on experience and Exposed to plant tissue culture		*					*	
		Hi-tech. Horticulture	· After completion of this course, the students will be learned in the field of crop production in protected cultivation	*	*		*		*		
			· 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 and Agro-advisory	· Students gain knowledge on system approach for representing soil- plant- atmospheric continuum, crop models and data requirements		*			*	*	*	

			· 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 Journalism	· Students will be 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.							*	