Teerthanker Mahaveer University College of Agriculture Science

B.Sc. (Agriculture)

Programme Outcome

PO-1	:	Understanding the concepts of agriculture for their practical utility in Indian context
PO-2	:	Understanding efficient utilization of agri-resources in farming
PO-3	:	Improving of communication and learning skills
PO-4	:	Analyzing strengths, weaknesses, opportunities and threats of modern technologies
PO-5	:	Analyzing site-specific and tactical solutions under ambient and stressful situations.
PO-6	:	Developing entrepreneurial skills and business management competence in agriculture
		and allied sectors.
PO-7	:	Developing team spirit and leadership quality for searching novel solutions of site
		specific agriculture

Programme Specific Outcome

PSO-1	:	Understanding the integrated management of sustainable agriculture, horticulture,
		vegetable science, forestry, agro forestry and livestock production.
PSO-2	:	Applying the tools and techniques of agronomy, soil science, plant pathology, and
		entomology and allied sciences for enhancing agriculture productivity.
PSO-3	:	Analyzing the information related to agricultural economics for finding solution for
		various problems.
PSO-4	:	Collaborating with farmers, industries and different types of institutions for devising
		useful solutions.
PSO-5	••	Evaluating the efficiency of various technologies for identifying better site specific
		solutions for agriculture sector
PSO-6	:	Developing competence in agricultural extension and managing different types of
		agricultural resources.
PSO-7	:	Developing entrepreneurial skills and business management competence in
		agriculture and allied sciences.
PSO-8	:	Developing entrepreneurial skill with using smart agri-practices in agribusiness
		module through Experience Learning Programmes

Course Outcomes

BAG 107	CO-1	Understanding the scope and practices of Agronomy.
	CO-2	Demonstrating the methods of irrigation, crop rotation, weeding in different crops.
	CO-3	Applying the method of seed sowing, tillage, weeding, irrigation, and crop management in problematic areas.
	CO-4	Analyzing the effect of weed-crop competition on agricultural productivity.
BAG 102	CO-1	Understanding the concept of soil and soil profile.
	CO-2	Explaining the concept of soil texture, soil taxonomy, soil water retention, movement and availability.
	CO-3	Analyzing the effect of pH on soil nutrient availability.

	CO-4	Identifying the macro and microorganisms and their effect on soil.
	CO-5	Examining the physical and chemical properties of soil.
BAG 104	CO-1	Understanding the concepts of horticulture including the management of
		water, weed, fertility, and market chain.
	CO-2	Explaining the vegetable gardens, orchards and their management
		practices.
	CO-3	Analyzing the weed management, fertility management, organic farming
		and production for fruit, vegetable and floriculture crops.
BAG 108	CO-1	Understanding the basic concepts and principles of forestry and agro-
		forestry systems.
	CO-2	Applying various methods, designs and techniques for the establishment
		of agro-forestry systems in different agro-climatic conditions.
	CO-3	Analyzing various procedures, methods and theories adopted for
		identifying, measuring and establishing the different agro-forestry
		systems.
	CO-4	Evaluating the different methodologies and techniques adopted for the
		development of agro-forestry systems for ensuring food security.
BAG 109	CO-1	Understanding the structure, functions and chemical nature of living
		systems
	CO-2	Understanding the application of the modern approaches of
	<u> </u>	biotechnology in micro-propagation and crop improvement
	CO-3	Analyzing the qualitative and quantitative properties of various
PAC 110	<u> </u>	biomolecules.
DAG 110	0-1	stratification culture and social Institutions
	CO-2	Recognizing the learning domains personality and motivation in
	CO-2	agriculture extension
	CO-3	Applying the educational psychology in agriculture extension
	CO-4	Analyzing the personality learning process and motivation in rural
		context
BAG 111	CO-1	Understanding the diversity and morphology of living world.
	CO-2	Explaining different levels of biological organizations
	CO-3	Identifying the specifications of important families of angiosperms
	CO-4	Evaluating the germination capacities of seeds of important crops
BAG 112	CO-1	Understanding the basic concepts of mathematics applied in agriculture
	CO-2	Applying the mathematical equations in various fields of agriculture
		science
BAG 113	CO-1	Understanding the principles, theories, practices and status of ancient
		and modern Indian agricultural systems.
	CO-2	Applying various traditional methods and techniques for plant production
		and protection in present day agriculture system.
	CO-3	Analyzing the effect of indigenous traditional knowledge on the
		development of modern agriculture system.
	CO-4	Evaluating the different ancient methodologies and techniques adopted
		for the development of Indian agriculture system.
TMUGE 114	CO-1	Understanding importance of English language.
	CO-2	Understanding the basics of communication

	CO-3	Applying the written communication skills.
BAG 154	CO-1	Analyzing the numerical exercises on fertilizer requirement
	CO-2	Understanding the proper application of seeds, fertilizers, pesticides and
		tillage
	CO-3	Applying the seed germination and viability test.
BAG 152	CO-1	Understanding and evaluating soil acidity and alkalinity with the help of
		pH meter.
	CO-2	Analyzing the physical properties of soil
	CO-3	Applying stokes' law for obtaining terminal velocity of a partial
BAG 153	CO-1	Understanding the identification scheme of garden tools and horticultural
		crops.
	CO-2	Applying the techniques of micro propagation in horticultural crops.
	CO-3	Applying different methods of pruning in fruit trees.
BAG 155	CO-1	Applying various designs and layouts of agro-forestry systems for
		maximizing the production and income in agriculture.
	CO-2	Applying the genetic and agronomic principles for growing various
	<u> </u>	multipurpose tree species to achieve maximum economic yield per year
BAG 156	0-1	Applying the approaches of biotechnology in micro-propagation and crop
	<u> </u>	Applyzing the qualitative and quantitative properties of various
	0-2	hispolecules
	CO-3	Evaluating the optimum chemical conditions required for proper
		functioning of life
BAG 157	CO-1	Understanding the concept of morphology and anatomy of flowering
		plants for evaluating their different modifications
	CO-2	Applying the concepts of systematic botany to compare the family
		characteristics of agricultural crops
BAG 207	CO-1	Understanding basic concepts, theories and principles of genetics for
		improving yield and other attributing characters in crop plants.
	CO-2	Applying the methods and techniques of cyto-genetics to overcome
		various problems and drawbacks of plant breeding.
	CO-3	Analyzing various procedures, approaches and practices of qualitative and
		quantitative genetics adopted for the effective crop improvement
		programme.
	CO-4	Evaluating different methodologies and techniques used to enhance
	<u> </u>	quality and yield of crops at genetic level.
BAG 208	0-1	parasitic and non parasitic pathogons
	<u> </u>	Understanding the plant disease management through chemical cultural
	0-2	and biological practices
	CO-3	Identifying the importance of microorganisms in agriculture
BAG 209	CO-1	Understanding the classification, cause and type of soil erosion
	CO-2	Applying and analyzing the control measures for soil erosion
	CO-3	Understanding and analyzing soil loss by USLE (universal soil loss
		equation)
BAG210	CO-1	Understanding the physiological aspects of plant life and their impact on
		plant growth and development

	CO-2	Applying the concepts of crop physiology for developing good agricultural
		practices.
	CO-3	Evaluating the crop health and productivity through applying various
		parameters of crop physiology
BAG211	CO-1	Understanding the characteristics, diversity, importance, identification,
		structure, and function of class Insecta.
	CO-2	Explaining the evolutionary and ecological relationships of insects with
		other life forms.
	CO-3	Describing the principles and methods of managing insect pest
		populations.
BAG212	CO-1	Understanding the principles of extension programme in agriculture.
	CO-2	Applying various concepts and leadership skills for effective extension
		administration at village level.
	CO-3	Analyzing various procedures and ICT methods adopted for effective
		communication skills.
BAG213	CO-1	Understanding the principles, importance and application of economics in
		agriculture and allied sectors.
	CO-2	Explaining the market forms, various factors of production, money and
		demand- supply dynamics of commodities and its role in price
		determination
BAG231	CO -1	Understanding the basic components of computer, operating systems, an
		application programs.
	CO-2	Practicing various applications on computer like MS DOS, MS Office, and
		internet
TMUGE232	CO-1	Understanding the correct use of English grammar.
	CO-2	Applying non-verbal communication skills
	CO-3	Understanding strategies of oral presentation.
	CO-4	Applying correct writing techniques in official communication.
BAG253	CO-1	Applying the various principles and techniques of cytogenetics and
		molecular genetics.
	CO-2	Analyzing the information, creatively and imaginatively in seeking the
		solutions to overcome the challenges related to genetics.
	CO-3	Evaluating the effectiveness of the different mechanisms used to enhance
		genetic level of the crops.
DAG254	<u> </u>	Analyzing various signs and symptoms for proper identification of plant
	CO-1	Analyzing various signs and symptoms for proper identification of plant
	CO-1	Analyzing various signs and symptoms for proper identification of plant diseases through Koch's postulates
	CO-1 CO-2	Analyzing various signs and symptoms for proper identification of plant diseases through Koch's postulates Analysis potential of beneficial plant associated microbes for enhancing
	CO-1 CO-2	Analyzing various signs and symptoms for proper identification of plant diseases through Koch's postulates Analysis potential of beneficial plant associated microbes for enhancing plant growth and health
BAG255	CO-1 CO-2 CO-3	Analyzing various signs and symptoms for proper identification of plant diseases through Koch's postulates Analysis potential of beneficial plant associated microbes for enhancing plant growth and health Understanding the laboratory setup and equipment used in microbiology.
BAG255	CO-1 CO-2 CO-3 CO-1	Analyzing various signs and symptoms for proper identification of plant diseases through Koch's postulates Analysis potential of beneficial plant associated microbes for enhancing plant growth and health Understanding the laboratory setup and equipment used in microbiology. Understanding and applying different concept of soil conservation
BAG255	CO-1 CO-2 CO-3 CO-1 CO-2	Analyzing various signs and symptoms for proper identification of plant diseases through Koch's postulates Analysis potential of beneficial plant associated microbes for enhancing plant growth and health Understanding the laboratory setup and equipment used in microbiology. Understanding and applying different concept of soil conservation Understanding and evaluating the soil loss with the help of USLE Applying various parameters of crop physiology for evaluating the crop
BAG255 BAG256	CO-1 CO-2 CO-3 CO-1 CO-2 CO-1	Analyzing various signs and symptoms for proper identification of plant diseases through Koch's postulates Analysis potential of beneficial plant associated microbes for enhancing plant growth and health Understanding the laboratory setup and equipment used in microbiology. Understanding and applying different concept of soil conservation Understanding and evaluating the soil loss with the help of USLE Applying various parameters of crop physiology for evaluating the crop health and productivity
BAG255 BAG256	CO-1 CO-2 CO-3 CO-1 CO-2 CO-1	Analyzing various signs and symptoms for proper identification of plant diseases through Koch's postulates Analysis potential of beneficial plant associated microbes for enhancing plant growth and health Understanding the laboratory setup and equipment used in microbiology. Understanding and applying different concept of soil conservation Understanding and evaluating the soil loss with the help of USLE Applying various parameters of crop physiology for evaluating the crop health and productivity
BAG255 BAG256	CO-1 CO-2 CO-3 CO-1 CO-2 CO-1 CO-2	Analyzing various signs and symptoms for proper identification of plant diseases through Koch's postulates Analysis potential of beneficial plant associated microbes for enhancing plant growth and health Understanding the laboratory setup and equipment used in microbiology. Understanding and applying different concept of soil conservation Understanding and evaluating the soil loss with the help of USLE Applying various parameters of crop physiology for evaluating the crop health and productivity Applying the concepts of crop physiology for developing good agricultural practices for enhancing sustainable crop productivity
BAG255 BAG256 BAG257	CO-1 CO-2 CO-3 CO-1 CO-2 CO-1 CO-2	Analyzing various signs and symptoms for proper identification of plant diseases through Koch's postulates Analysis potential of beneficial plant associated microbes for enhancing plant growth and health Understanding the laboratory setup and equipment used in microbiology. Understanding and applying different concept of soil conservation Understanding and evaluating the soil loss with the help of USLE Applying various parameters of crop physiology for evaluating the crop health and productivity Applying the concepts of crop physiology for developing good agricultural practices for enhancing sustainable crop productivity.

	CO-2	Applying the concepts of Agricultural Entomology in the field of plant
		protection.
BAG258	CO-1	Understanding the principles and various steps of extensionProgramme planning in agriculture.
	CO-2	Applying various concepts and leadership skills for effective extension
		administration at village level.
	CO-3	Analyzing various procedures, methods and theories adopted for effective
		ICT to develop communication skills.
BAG308	CO-1	Understanding cultivation practices of kharif crops.
	CO-2	Understanding production technology of major cereals, pulses, oilseeds,
		fiber and forage crops.
BAG309	CO-1	Understanding the basic concepts, theories and principles of plant
		breeding
	CO-2	Applying various methods and approaches of traditional and advanced
		plant breeding
	CO-3	Analyzing various procedures, techniques and strategies for high quality
		seed production
	CO-4	Evaluating different methodologies and procedures used to increase in
		the productivity of field crops.
BAG310	CO-1	Understanding the importance of credit and role of financial institution in
		Indian Agriculture.
	CO-2	Describing the computer operating system and ICT tools and their
		application in Agriculture
	CO-3	Analyzing the agricultural credit and financial statements for the farmers
DAC212	<u> </u>	and agrientrepreneur
BAG312	CO-1	Understanding the importance of vegetable & spice crops
	0-2	vegetable crops
BAG313	CO-1	Understanding of various environmental aspects, biodiversity
		conservation and role of individual, NGOs and Government for
		environmental protection activities
	CO-2	Recognizing the importance of sustainable development and appropriate
		use of natural resources and maintaining the balanced ecosystem.
	CO-3	Discussing new techniques of development through Environmental
		Impact Assessment (EIA) to reduce the rate of consumption of natural
		resources
	CO-4	Analyzing various controlling measures of environmental pollution, ozone
		layer depletion, global warming and acid rain
	CO-5	Evaluating the importance of eco-friendly activities to maintain the
	<u> </u>	quality of environment and numan life
DAG314	0-1	agriculture
	<u> </u>	deficulture.
		graphical representation of data
	<u>()</u> 3	graphical representation of uala.
	20-5	dispersion
	<u> </u>	Understanding applying analyzing & evaluating the concepts of

		correlation & regression.
BAG315	CO-1	Understanding the importance of Indian and exotic breeds of livestock
		and poultry.
	CO-2	Understanding the management of different species of livestock and
		poultry.
	CO-3	Analyzing the prevention and control of important diseases of livestock
		and poultry.
BAG317	CO-1	Understanding the working, operation and uses of different farm
		machines
	CO-2	Understanding the various scientific principles for the efficient operation
		of farming activities
	CO-3	Applying the different farming machine-operational methods
	CO-5	Creating an appropriate method of farm machining that can give
		maximum crop productivity with minimum cost and human efforts.
TMUGE 314	CO-1	Understanding the correct use of English vocabulary.
	CO-2	Applying verbal and non verbal communication skills.
	CO-3	Understanding strategies of oral presentation.
	CO-4	Applying reading comprehension skills
BAG 358	CO-1	Applying redding comprehension skins:
		sowing of Kharif crops
	CO-2	Applying the modern agricultural practices for maximizing the
		productivity of Kharif crops
BAG 359	CO-1	Applying the various methods and approaches of classical and modern
		plant breeding to strengthen the genetic level of crops.
	CO-2	Analyzing the data in resolving the various problems related to crop
		production
	CO-3	Evaluating the productiveness of different procedures used in plant
		breeding.
BAG 360	CO-1	Analysing the utilization, allocation of capital and performance of financial
		institution.
	CO-2	Estimating the credit requirement and appraisal of loan and preparation
		of financial and farm business project report.
	CO-3	Applying the statistical and ICT tools for data analysis.
BAG 362	CO-1	Understanding the identification of vegetables & spice crops and their
		seeds.
	CO-2	Applying the fertilizers and other agri-inputs in proper doses
	CO-3	Evaluating the economics of vegetables and spices cultivation.
BAG 364	CO-1	Applying & analyzing the concepts of diagrammatic & graphical
		representation of data.
	CO-2	Applying & analyzing the concepts of central tendency & dispersion.
	CO-3	Applying, analyzing & evaluating the concepts of correlation & regression.
BAG 365	CO-1	Identifying the body parts, and markers of good quality livestock
	CO-2	Describing animal housing and clean milk production
	CO-3	Applying the economics of farm animal production
BAG 368	CO-1	Applying the various methods in the field study
	CO-2	Analyzing the environmental condition based on visits of local areas-river,
		forest, rural, urban and industrial sites

	CO-3	Evaluating the impact of climate change on agriculture production,
		natural resources, economy and mitigation strategies
BAG 410	CO-1	Understanding and applying the cultivation practices of major cereals,
		pulses, oil seed, forage medicinal and aromatic rabi season crop
BAG 411	CO-1	Understanding the scope and importance of ornamental crops and their
		use in landscaping
	CO-2	Analyzing various production technologies of important medicinal,
		aromatic and ornamental crops.
	CO-3	Evaluating different packages of practices for loose flowers
BAG412	CO-1	Understanding markets, marketing functions, procedures and policies.
	CO-2	Recognizing efficient marketing channels for farmers for maximizing their
		economic gains
	CO-3	Explaining international trade and IPR in agriculture
BAG 413	CO-1	Understanding and applying the agricultural meteorology on weather
		forecast
	CO-2	Understanding the characteristic, behavior and phenomenon of the
		atmosphere.
	CO-3	Applying the tools of agro meteorology in agriculture.
BAG 414	CO-1	Understanding the types, scope and importance of farming system
	CO-2	Applying the cropping and farming system for sustainable agriculture.
	CO-3	Evaluating the efficiency of different cropping systems.
BAG415	CO-1	Understanding the relative importance of different sources of energy for
		agriculture sector and their sustainability.
	0-2	Understanding various technological aspects of sustainable utilization of
	<u> </u>	Dio- and solar energy
	0-5	sustainable energy for agriculture sector
BAG /16	CO-1	Inderstanding the soil forming processes and the current scenario of
		problematic soils in India and world
	CO-2	Applying remote sensing and GIS in identifying diagnosing and
		management to reclaim problematic soils
	CO-3	Analyzing the irrigation water quality and use of saline water in
		agriculture
BAG 417	CO-1	Understanding the scope and importance of fruit and plantation crops
		industries in India
	CO-2	Demonstrating the effective production technologies for the cultivation of
		important fruit and plantation crops
	CO-3	Analyzing various production technologies for the cultivation of fruit and
		plantation crops
BAG 418	CO-1	Understanding the history, type and importance of seed and seed
		technology.
	CO-2	Understanding the duties and powers of seed inspector.
	CO-3	Explaining common pests, diseases and their management in seed
		storage.
	CO-4	Evaluating the characteristics of good quality seeds of cereals, pulses,
		todder and vegetables.
BAG 419	CO-1	Understanding the significance of value inputs, distinguish between

		values and skills, the need, content and process of value education,
	CO-2	Understanding the meaning of Harmony in the Self the Co-existence of
		Self and Body, the value of harmonious relationship based on trust,
		respect and other naturally acceptable feelings in human-human
		relationships and explore their role in ensuring a harmonious society
	CO-3	Exploring the meaning of happiness and prosperity and do a correct
		appraisal of the current scenario in the society
	CO-4	Applying the harmonious relationship in nature and existence, and work
		out their mutually fulfilling participation in the nature.
TMUGE 414	CO-1	Understanding the correct use listening and speaking skills.
	CO-2	Applying job oriented skills.
	CO-3	Understanding strategies of oral presentation.
	CO-4	Applying professional writing skills.
BAG 455	CO-1	Identification of weeds in rabi season crops
	CO-2	Understanding and applying the sowing methods of wheat and sugarcane
	CO-3	Understanding and analysing yield contributing characters of rabi season
		crops and juice quality analysis of sugarcane
	CO-4	Applying the oil extraction of medicinal crops
BAG 456	CO-1	Understanding the propagation, scarification and stratification of seeds.
	CO-2	Applying the preparation of plant bio-regulators and their uses.
	CO-3	Analyzing the propagation methods for fruit and plantation crops.
BAG458	CO-1	Understanding the calculation of demand and supply and projection of
		producer surplus of agricultural commodities.
	CO-2	Understanding of identification of marketing channels and functions and
		projection of marketing cost, marketing margin, and price spread.
BAG 459	CO-1	Describing the shortwave and long wave radiation, and its estimation
		using Planck's intensity law.
	CO-2	Describing the wind speed and wind direction, sunshine duration, albedo
		and computation of radiation intensity using BSS.
	CO-3	Applying the tabulation and analysis of rain through open pan
		evaporation methods.
BAG 460	CO-1	Understanding various technological aspects of sustainable utilization of
		renewable energy.
	CO-2	Applying the above knowledge for evaluating the different sources of
	60.1	sustainable energy for agriculture sector
BAG 462	0-1	Applying the seed production techniques in major cereal, pulses, oil seed
	<u> </u>	Analyzing the cood compling and cood tecting tools for measuring the
	0-2	analyzing the seed sampling and seed testing tools for measuring the
	<u> </u>	Fugurating the cortification and genetic purity of souds
		Evaluating the certification and genetic purity of seeds
DAGE 401	0-1	new agricultural policy
	(0-3	Inderstanding the procedure of setting up new agro based industries
	CO-2	Understanding the management functions and carrying out SWOT
		analysis of any husiness environment
BAGE 402	<u> </u>	Inderstanding the basics of different agrochemicals
	CO-1	Application of various methods and techniques of different agrochemicals
	00-2	Application of various methods and techniques of different agrociterificals

	CO-4	Analyzing various methodologies and techniques used for the
		development of ecological agriculture
BAGE 403	CO-1	Understanding basic concepts, theories and principles of plant breeding
		for improving yield and other traits in crops.
	CO-2	Applying various methods and approaches of traditional and advanced
		plant breeding to enhance the crop yield.
	CO-3	Analyzing various procedures, techniques and strategies for quality seed
		production to ensure the food security.
	CO-4	Evaluating different methodologies and procedures used to intensify the
		crop productivity.
BAGE 404	CO-1	Understanding the basic concepts and principles of landscaping
	CO-2	Understanding and analyzing the beneficial trees, climbers and creepers
		used in different landscapes
	CO-3	Analyzing the propagation, planting, and canopy management in
		horticulture crops
BAGE 451	CO-1	Understanding of Agri – inputs outputs market financial institutions.
	CO-2	Understanding of preparation, analysis and writing of project
BAGE 452	CO-1	Studying the various methods of pesticides application
	CO-2	Applying various fertilizers to improve soil fertility.
BAGE 453	CO-1	Understanding the selfing and crossing techniques in self and cross
		pollinated species,
	CO-2	Understanding and applying the tools and techniques for hybrid seed
		production
	CO-3	Analysing the role of pollinators in hybrid seed production
BAGE 454	CO-1	Understanding the tools for identification of trees, annuals, pot plants
		and shrubs in different landscapes.
	CO-2	Preparing and applying the layout of formal and informal garden.
BAG 509	<u>CO-1</u>	Understanding the various categories of insect pest and diseases.
	CO-2	Explaining the application of integrated pest and disease management
	CO-3	Applying the tools of integrated pest and disease management: cultural,
	<u> </u>	The channel, physical, biological, legislative and chemical control.
	CO-4	forecasting
BAG 510	<u> </u>	Understanding the types and importance of organic and inorganic
DAG 510	CO-1	fortilizers
	CO-2	Understanding the mechanism of nutrient transport and uptake in soil
		and in plant
	CO-3	Analyzing the doses of micro and macronutrients in various fertilizers.
BAG 511	CO-1	Understanding the classification of different arthropods pests and
		importance of beneficial insects.
	CO-2	Identifying the different insect pest of field and stored grains
	CO-3	Applying various procedures and approaches for insect-pests
		management.
BAG 512	CO-1	Understanding of the symptoms, etiology, disease cycle and management
		of major diseases of field and horticultural crop
	CO-2	Demonstrating the analysis and management of diseased field
BAG 513	CO-1	Understanding the importance of wild relatives for producing new

		varieties of Kharif crop
	CO-2	Understanding the floral biology, breeding behaviour, hybridization and
		population handling methods applied to different Kharif crops
	CO-3	Analyzing the potential of various hybridization methods and techniques
		in different crops.
BAG 514	CO-1	Understanding the concepts and government policies for
		entrepreneurship development.
	CO-2	Explaining the business development and managerial skill.
	CO-3	Applying the management techniques in production and marketing
		management.
	CO-4	Analyzing the financial feasibility of Agricultural Projects.
BAG 515	CO-1	Understanding the basic concepts, tools and techniques of remote
		sensing and geo-informatics.
	CO-2	Demonstrating use of nanotechnology for scaling up farm productivity.
	CO-3	Analyzing crop simulation models and their uses for optimization of
		agricultural inputs.
	CO-4	Evaluating the role of geo-informatics in precision agriculture.
BAG 516	CO-1	Understanding the history, concept and role of national and international
		IPRs regulatory bodies
	CO-2	Recognizing the history of UPOV for protection of plant varieties in India.
	CO-3	Applying the Plant Breeder's Rights for registration of plant varieties
		under PPV&FRs act.
	CO-4	Analyzing Indian Biological Diversity Acts and their salient features with
		work plan.
BAG 555	CO-1	Understanding various methods of diagnosis and detection of various
		insect pests, and plant diseases
	0-2	Applying the methods of mass multiplication and production of
		plant protection
	<u> </u>	Applying the preventive strategies and IPM module for management of
		insect nests and diseases in field
BAG 556	CO-1	Understanding the role of nitrogen phosphorus and potassium in plant
DAG 550		health and productivity
	CO-2	Applying bio fertilizers in different crops
	CO-3	Evaluating the availability of nutrients in soil and fertilizers
BAG 557	CO-1	Applying various procedures of pest management in field crops and
		stored grains.
	CO-2	Applying various methods of managing the beneficial insects
BAG 558	CO-1	Diagnosing the occurrence of various diseases in field
	CO-2	Applying the management practices for different disease of agricultural
		crops.
BAG 559	CO 1	Remembering the basic floral structure of various kharif crops
	CO2	Understanding the basic floral biology, breeding behaviour, various
		emasculation and hybridization techniques applied to kharif crops.
	CO 3	Evaluation various concepts and methods of crop Improvement based on
		their application in field.

BAG 560	CO-1	Understanding the business development ideas and management skills.
	CO-2	Preparing the business plan and proposal for entrepreneurship
		development
BAG 561	CO-1	Understanding the working and uses of different advance scanning
		methods of crop data collection using satellite and precise computer
		software.
	CO-2	Applying the knowledge of data classification of crop field according to its
		characteristics.
	CO-3	Evaluating the real time crop pattern by utilizing latest available scanning
		techniques and softwares.
	CO-4	Creating appropriate methods for precise prediction of crop productivity
BAG 562	CO-1	Understanding and applying crop planning and raising field crops in
		multiple cropping systems
	CO-2	Understanding the seed production, mechanization, resource
		conservation, integrated nutrient, insect-pest and disease management
		technologies.
	CO-3	Applying field preparation, seed treatment, nursery raising, sowing,
		weeding, irrigation and management of insect-pests diseases of crops.
	CO-4	Evaluating the methods of harvesting, threshing, drying, winnowing,
		storage and marketing of produce.
	CO-5	Preparing the balance sheet including cost of cultivation and net returns.
TMUGS 501	CO-1	Utilizing effective verbal and non-verbal communication techniques in
		formal and informal settings
	CO-2	Understanding and analyzing self and devising a strategy for self growth
		and development.
	CO-3	Adapting a positive mindset conducive for growth through optimism and
	<u> </u>	constructive thinking.
	CO-4	Othizing time in the most effective manner and avoiding procrastination.
	0-5	like SWOT, Simulation and Decision Tree.
	CO-6	Formulating strategies of avoiding time wasters and preparing to-do list
		to manage priorities and achieve SMART goals.
BAGE 501	CO-1	Understanding the basic concepts of food safety management.
	CO-2	Applying effective storage and hygienic methods to control the
		contamination.
BAGE 502	CO-1	Understanding the basics of bio-pesticide and bio-fertilizers.
	CO-2	Explaining the application of mass production technology of bio-
		pesticides.
	CO-3	Describing the quality control and marketing of bio-fertilizers.
BAGE 503	<u>CO-1</u>	Understanding importance and scope of protected cultivation.
	CO-2	Understanding greenhouse technology and its application in cultivation of
	<u> </u>	Important norticultural crops
	10-3	Analyzing the propagation and production of quality planting material of
		norucultural crops.
DAGE 504		Diversion of the concepts and principles of micropropagation
	0-2	senditions
		conations

	CO-3	Applying various micro propagation methods to conserve germplasm and
		vitro, production of secondary metabolites.
BAGE 551	CO-1	Understanding the various methods and techniques for the microbial and
		chemical assessment of fresh / processed food
	CO-2	Applying different methodologies and regulation for implementing
		HACCP, FSMS to ensure food safety
BAGE 552	CO-1	Understanding the Isolation , purification of important agents of
		biopesticides and biofertilizers
	CO-2	Applying the mass multiplication and inoculums production of
		biofertilizers
BAGE 553	CO-1	Understanding the use of protrays in quality planting material production.
	CO-2	Applying the bed preparation and planting of crop.
	CO-3	Analyzing the methods of raising of seedlings and saplings under
		protected conditions.
BAGE 554	CO-1	Applying the approaches of biotechnology in micro-propagation
	CO-2	Analyzing the different sterilization techniques in plant tissue culture
	CO-3	Evaluating the optimum nutrient composition required for growth of
		explant
BAG 607	CO-1	Understanding the history and prospects of rainfed agriculture and
	<u> </u>	watershed in India
	CO-2	Explaining the water narvesting technique to mitigate drought.
BAG 608	CO-1	Understanding the concepts of green house.
	<u> </u>	Application of effective materials and equipments used in green nouse.
	CO-3	Analyzing the cost estimation and economic analysis of green house.
	CO-4	green house.
BAG 609	CO-1	Understanding of the symptoms, etiology, disease cycle and management
		of major diseases of field and horticultural crops
	CO-2	Analyzing the diseased field and their management practices
BAG 610	CO-1	Understanding the importance of pre and post-harvest processing and
		factors affecting the productivity of horticultural crops
	CO-2	Explaining the principles, concept and methods of preservation.
	CO-3	Applying various methods and principles of post harvesting and field
		handling.
BAG 611	CO-1	Understanding the basic floral biology, breeding behaviour, various
		hybridization and population handling methods applied to different Rabi
		crops
	CO-2	Applying the wild relative to produce new varieties of Rabi crops
	CO-3	Analyzing the potential of various hybridization methods and techniques
	<u> </u>	In different crops.
	CO-4	evaluation of the overall understanding of the concepts and methods
BAG 612	CO 1	Understanding the various principles of farm management
DAG 012	CO-1	Discussing maintenance of farm records and accounts
	CO-2	Explaining natural resource aconomics and their entired use
BAG 614	CO.1	Linderstanding the principles of food science and putrition
DAG 014	CO-1	Applying offective methods and practices for putritional management
1	LO-2	Apprying enective methods and practices for nutritional management.

	CO-3	Analyzing various procedures, methods and techniques for microbial and
		chemical assessment of fresh and processed foods.
	CO-4	Evaluating the different methodologies and technologies adopted for
		food processing and preservation to ensure national food security.
BAG 615	CO-1	Describing the principles and scope of organic farming
	CO-2	Applying fundamentals of plant protection measures under organic mode
		of production.
	CO-3	Evaluating the measures of organic farming, marketing process and
		export potential of organic products.
BAG 616	CO-1	Understanding the importance of beneficial insects for human society
	CO-2	Understanding the tools and techniques for beekeeping ,silk and lac
		production
	CO-3	Applying various predators and parasitoids in managing the insect pests
		of various crops
BAG 657	CO-1	Understanding the meteorological tools for different areas of country.
	CO-2	Applying and the cropping pattern of different rainfed areas of the
		country.
BAG 658	CO-1	Understanding the different type of green houses based on shape
	CO-2	Applying the concept of rate of air exchange in an active summer winter
		cooling system.
	CO-3	Analyzing the moisture content of various grains by oven drying &
		infrared moisture methods.
BAG 659	CO-1	Understanding the importance of field visits and herbarium
	CO-2	Identifying and diagnosing the diseases in field crops
	CO-3	Applying management practices on diseased field.
BAG 660	CO-1	Understanding the different types of packaging for shelf life extension.
	CO-2	Applying the methods for preventing chilling and freezing injury in
		vegetables and fruits.
	CO-3	Evaluating the quality of horticultural products.
BAG 661	CO-1	Remembering basic floral structure, parts, floral diagram and floral
		formula of various rabi crops
	CO-2	Understanding the basic floral biology, breeding behaviour, emasculation
		and hybridization techniques applied to different rabi crops.
	CO-3	Evaluation of the concepts and methods based on their application in
		field.
BAG 662	CO-1	Understanding the farm lay out, cost and depreciation in farm
		management.
	CO-2	Preparing the farm plan, budget, record and accounting
BAG 663	CO-1	Understanding the crop planning and raising field crops in multiple
		cropping systems
	CO-2	Understanding the seed production, mechanization, resource
		conservation, integrated nutrient, insect-pest and disease management
	<u> </u>	technologies.
	0-3	Applying and evaluating the narvesting, threshing, drying, winnowing,
	<u> </u>	storage and marketing of produce.
	CO-4	Preparing the balance sheet including cost of cultivation and net returns
BAG 665	CO-1	Demonstrating the process of composting, vermicomposting and their

		quality parameters.
	CO-3	Evaluating various components of organic production processes
BAG 666	CO-1	Understanding the different species of honey bee, Silk worm and Lac
		insect.
	CO-2	Applying the beekeeping, sericulture and lac culture
	CO-3	Identifying and applying the techniques for mass multiplication of
		predators and parasitoids
	CO-4	Analyzing the impacts of beneficial insects.
TMUGS-601	CO-1	Communicating effectively in a variety of public and interpersonal
		settings.
	CO-1	Applying concepts of change management for growth and development
		by understanding inertia of change and mastering the Laws of Change.
	CO-3	Analyzing scenarios, synthesizing alternatives and thinking critically to
		negotiate, resolve conflicts and develop cordial interpersonal
		relationships.
	CO-4	Functioning in a team and enabling other people to act while encouraging
		growth and creating mutual respect and trust.
	CO-5	Handling difficult situations with grace, style, and professionalism.
BAGE 601	CO-1	Understanding the importance of Hi-tech Horticulture and protected
	CO-2	Describing the Differential Geo-positioning System (DGPS).
	CO-3	Applying the high density orcharding, precision farming and micro
		propagation in horticultural crops
BAGE 602	CO-1	Understanding the principles of weed management
	<u> </u>	Applying different tools and techniques for weed management.
BAGE 603	CO-1	Understanding the system approach for representing soil-plant-
	<u> </u>	Demonstrating the grap responses to weather elements for grap growth
	0-2	and development
	CO-3	Analyzing the tools & techniques for weather forecasting and ITK
	CO-4	Creating agro-advisory bulletin based on weather forecast
BAGE 604	CO-4	Understanding the agriculture journalism newspaper and magazine as
DAGE 004	0-1	communication media
	CO-2	Demonstrating the writing of agriculture stories using photographs and
		artwork.
BAGE 651	CO-1	Understanding the types of polyhouses and shade net houses.
	CO-2	Applying the tools and equipments of intercultural operations.
	CO-3	Applying the concepts of canopy management in horticultural crops.
BAGE 652	CO-1	Understanding the scheme of weed identification
	CO-2	Applying the techniques of weed eradication.
	CO-3	Analyzing the yield losses due to weeds.
BAGE 653	CO-1	Developing skills for using the computer software for the preparation of
		crop growth models and agro-advisory bulletin
	CO-2	Creating knowledge of weather forecast for preplanning of agricultural
		practices
BAGE 654	CO-1	Understanding and writing agricultural stories
	CO-2	Applying practices of interviewing and covering agricultural events

	CO-3	Applying the artwork for developing the agricultural story
BAG-754	CO-1	Understanding the functioning of various industries of agriculture sector
	CO-2	Describing the different aspects of agriculture in association of farmers
		and allied agencies
	CO-3	Analyzing the opportunities and challenges of agricultural industry
	CO-4	Identifying the problems in field due to prevalent agricultural practices
	CO-5	Evaluating the impact of plant diseases and pests on agricultural
		productivity and the efficacy of prevalent measures of management
BAG 852	CO-1	Understanding the basic principles and techniques of applied agricultural
		microbiology
	CO-2	Analyzing the effect of various microbial formulations on crop
		productivity and ecological benefits
	CO-3	Developing novel microbial formulations and demonstrating their
		potential at farmers' fields
	CO-4	Evaluating the potential of microbes in laboratory, green house and field
	CO-5	Evaluating the different methods of microbial formulations, storage and
		application in fields
BAG 854	CO-1	Understanding the principles and methods of mushroom cultivation
	CO-2	Demonstrating the production technology of oyster and button
		mushroom
	CO-3	Developing entrepreneurship in mushroom cultivation
BAG- 858	CO-1	Understanding the importance of commercial horticulture and protected
		cultivation
	CO-2	Applying the propagation and various sowing methods
	CO-3	Applying and analyzing the food safety methods
BAG-860	CO-1	Understanding the concepts, principles and techniques of food processing
	CO-2	Explaining the concept of successful entrepreneur in the field of food
		processing.
	CO-3	Applying principles and various food processing technique to develop
		product from a variety of food crops and utilization of waste food
		byproduct to prepare value added product