

Subject Name	Description
Introductory Agriculture	The students get acquainted with meaning and scope of agriculture; development of agriculture in India in general.
Principles of Agriculture Meteorology	The knowledge is imparted on the atmosphere and its structure, brief description of weather elements. Impact of weather elements on crop and livestock production. Crop microclimate and its modification and weather forecasting
Introduction to Soil Science	The students get knowledge on the concept of land, soil and soil science; earth crust and its composition; soil forming rocks and minerals; weathering; soil formation: factors and processes; Composition of soil; soil profile, soil colour, taxonomic classification of soils. Soil water- retention and potential, soil moisture constants, movement of soil water, soil temperature and thermal properties, soil air and gaseous exchange, influence of soil temperature and air on plant growth
Principles of Seed Science Technology	The students learn about maintenance of genetic purity during seed production, seed quality, different classes of seed, seed production of field and vegetable crops. Seed certification, phases of certification, procedure for seed certification, field inspection
Introduction to Computers Applications	Knowledge is given on Introduction to Computers, Anatomy of Computers, Input and Output Devices. Operating System – DOS and WINDOWS.
Communication Skills in English	The students are going to learn about Essentials of Grammar, Vocabulary building, Writing skills and speaking skills.
Fundamentals of Rural Sociology	The students are getting knowledge regarding importance of rural sociology in agricultural extension; differences and relationship between rural and urban communities. Psychology and educational psychology.
Introductory Biology (only for students from Math stream)  Or Elementary Mathematics (only for students from Bio stream)	Morphological features of angiosperms, Binomial nomenclature, taxonomic classification of animal kingdom; animal life.  Algebra: arithmetic and geometric series; permutation and combination, Co- ordinate geometry, Differential calculus
Principles of Chemistry	Chromatography : Gas solid Chromatography, Bio-organic Chemistry
Principles of Agronomy	The students are able to know about the basics of tillage, crop production, science and technology of producing and using plants for food, fuel, fiber, and land reclamation. Cropping pattern(s), cropping systems and farming systems, Tillage and its objectives, soil tilth and its optimum requirement for important crops.

Livestock production management	The students know about Animal husbandry practices have varied widely across cultures and time periods.
Introductory Entomology	The students will get knowledge of Morphology: structure and functions of insects, Systematics: taxonomy and Binomial nomenclature of Insects.
Soil Fertility, Soil Chemistry Nutrient Management	The students will know about Soil fertility and productivity; essential and beneficial nutrient elements, criteria of essentiality, available forms, mechanism of nutrient transport to plants, functions and deficiency symptoms in plants. Evaluation and soil testing.
Fundamentals of agricultural economics	The students will be acquainted with knowledge related to Consumer's surplus, Demand and Supply, kinds of inflation and effect of inflation; basic concepts of economic growth and development.
Fundamentals of Microbiology	The students will be knowing role of microbes in agriculture and fermentation, germ theory of disease, protection against infections, Soil microbiology, Microbiology of water and water purification; beneficial microorganisms in agriculture: biofertilizer (bacterial cyanobacterial and fungal), microbial insecticides, microbial agents for control of plant diseases, biodegradation of pesticides, biogas production, biodegradable plastics; plant-microbe interactions and use of genetically modified organisms for crop improvement.
Fundamentals of Genetics	The students will be having knowledge of types of gene interaction, multiple alleles, pleiotropism, penetrance and expressivity; quantitative traits, qualitative traits, Mutation and its characteristic features; Polyploidy and evolution of different crop species.
Introductory Biochemistry	Carbohydrates, Reaction Mechanisms of Glycolysis, TCA cycle, oxidative phosphorylation, HMP, glyoxalate pathway and gluconeogenesis, factors affecting enzyme activity, Photosynthesis: Significance, Reaction Mechanisms of Cyclic and Non-cyclic photo-phosphorylation, Calvin Cycle, C4 cycle, CAM Anatomy.