Course Outcomes: B. Sc. Medical (Botany)

Department of Botany	**After successful completion of three year degree program in Botany a student is able to:**
	1. Acquire fundamental Botanical knowledge through theory and practicals. 2. Understand role of living and fossil plants in our life. 3. Understand good laboratory practices and safety. 4. Create awareness about cultivation, conservation and sustainable utilization of biodiversity. 5. Purse higher education in the different fields such as Botany, Biotechnology, Forestry, Ethnobotany, Plant Systematics, Plant Physiology, Paleobotany etc. 6. Students have bright future to join DRDO, BSI, NBRI, CSIR-IARI, FRI etc as scientist-B after completing graduation. 7. Moreover students may compete for Indian Forest Service after studying botany in graduation.
B.Sc. Medical (Botany) Part-I (Semester-I and II)	
Course	**Outcome**
Paper- I: Diversity of Microbes Paper-II : Diversity of Cryptogams	1. Study of microbes and cryptogams to understand their Diversity. 2. Know the systematics, morphology and structure of virus, bacteria, algae, fungi , lichens, bryophytes, and Pteridophytes. 3. Know life cycle pattern and economic importance of microbes and cryptogams. 4. Evolution of stellar system in Fern-allies and Ferns.
Paper-III : Cell Biology Paper-IV : Genetics and Evolution	1. Students will study general structure and function of cell, cell envelope and cell organelles. 2. Know the chromosome organization, chromosome alteration and variation in chromosome number. 3. Study the structure and replication of DNA, RNA and protein synthesis. 4. Study the mutations, genetic variations and theories of evolution of life.
B.Sc. Medical (Botany) Part-II (Semester-III and IV)	
Course	**Outcome**
Paper V: Diversity and Systematics of Gymnosperms Paper VI: Diversity and	**1.** To impart knowledge to students about the general characters, classification, evolution and diversity of representatives of different gymnosperms.

Systematics of Angiosperms	**2.** Student will study the Geological time scale, fossilization and fossil gymnosperms. **3.** Know the general characters of progymnosperms and evolution of seed habit. **4.** Student acquaint about the origin and evolution of angiosperms and angiosperm taxonomy. **5.** Know the principles and rules of ICN and different system of angiosperm classification. **6.** Study the Diagnostic features and technical description of angiosperm families
Paper VII: Plant Anatomy Paper VIII: Development And Reproduction In Flowering Plants	**1.** Objective of the paper is to impart knowledge to students about the tissue systems, root shoot and leaf anatomy. **2.** Study Cambium and its functions along with Secondary growth including anomalous secondary growth. **3.** Students learn about the vegetative propagation and applications in floriculture and horticulture. **4.** Know about structure and development of flower and inflorescence types. **5.** Also learn sexual reproduction in angiosperm, structure of male and female gametophytes and post fertilization changes.
B.Sc. Medical (Botany) Part-III (Semester-V and VI)	
Course	**Outcome**
Paper IX: Plant Physiology Paper X: Plant Growth, Development And Biotechnology	1. Impart knowledge to students about the functional aspects of plant physiological reactions like ascent of sap, transpiration, translocation of nutrients, photosynthesis, respiration and nitrogen and lipid metabolism in relation to its dynamic environment. 2. Study of structure, classification and mechanism of enzyme action. 3. Students learn about the different technologies in biology of plants to understand its growth, growth kinetics and effect of light on germination and growth of seed and seedling under different environments. 4. Know tools and techniques of recombinat DNA technology. 5. Basic concept of plant tissue, culture, totipotency, micropropagation, anther culture, embryo culture, synthetic seeds and somatic hybridization. 6. Biotechnology and its application in human welfare with particular reference to industry, plant breeding and molecular farming.

Paper XI: Plant Ecology Paper XII: Plant Utilization	1. Students learn basic concepts of Ecology and make them aware of the various Environmental issues. 2. Study the Biodiversity and Conservation strategies, concept of hot spots, biomes, phytogeographic regions Conservation strategies, concept of hot spots, biomes, phytogeographic regions and vegetation types of India. 3. Know about succession, energetic and ecological productivity. 4. This will impart knowledge to students about the plant resources being used by human, their effective and sustainable utilization. 5. It also develop critical understanding of common cultivation practices and germplasm evolution of cereal crops and uses of oil, timber, and fibre yielding crops, vegetables, fruits, spices, medicinal, rubber, beverages, and narcotic plants.