

## 2.6.1: Program Outcomes

### Program : M.Sc. Botany

#### Program Outcomes (PO)

- PO1. **Critical Thinking:** Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.
- PO2. **Effective Communication:** Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
- PO3. **Social Interaction:** Elicit views of others, mediate disagreements and help reach conclusions in group settings.
- PO4. **Ethics:** Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
- PO5. **Environment and Sustainability:** Understand the issues of environmental contexts and sustainable development.
- PO6. **Self-directed and Life-long Learning:** Acquire the ability to engage in independent and life-long learning in the broadest context socio- technological changes

#### Program Specific Outcomes (PSO)

- PSO1. Understand the nature and basic concepts of cell biology, Biochemistry, Taxonomy and ecology.
- PSO2. Analyse the relationships among animals, plants and microbes
- PSO3. Perform procedures as per laboratory standards in the areas of Biochemistry, Bioinformatics, Taxonomy, Economic Botany and Ecology

#### Course Outcomes (CO)

- BOT 101: The structure in relation to function of cells the fundamental unit of life, are concerned in this course along with molecular present in cells and the flow they make the basic framework of cells and their continuity.

- BOT 102: Pertains to heredity and variation at molecular and cellular levels.
- BOT 103: Deals with regulation of growth and development of plant as affected by various growth regulations, thus cross talk and extrinsic biotic and abiotic factors.
- BOT 104: Provides a detailed view of the visualizing concepts and technique for genetic engineering and biotechnology.
- BOT 201: Highlights structural and functional aspects of the development of plants from zygots to the nature stage.
- BOT 202: Deals with naming and classification of plants their interrelationships and evolution.
- BOT 203: Apprises students of conventional and non-conventional plant resources being used by human, their effective and sustainable utilization and improvement by biotechnological tools.
- BOT 204: Makes students aware of the pests and pathogens adversely affecting the yield of important crop plants, their control underlying mechanisms of employed by plants for their defense and the approaches to strengthen their *irspenta* to have resistant crops.
- BOT 301: Algae on paper deals the diversity and the important roles. Algae, a letergenious group of prokaryotes protons and plants role in environment and human welfare.
- BOT 302: Deals with all microbes and the technologies for their effective uses in industry and mitigation of environmental concerns.
- BOT 303: Highlights advances made in diversity analysis, developmental biology, reproductive biology and phylogenetics of the lower plants with female organ being archegoniuous present in bryophytes, pteridophytes and some most gymnosperms.
- BOT 304: Understanding the population structure of the organisms, organization into communities and their functional relationships with their environment.
- BOT 305: Strategies adopted by the organisms under clanging environment in relation to their biogeographic distribution.
- BOT 306: Deals with fundamentals of bioinformatics tools, computational biology and statistical methods utmost necessary for contemporary research.
- BOT 307: Genetic modulation of Protien.
- BOT 308: Deals with the fundamental of organisms capability to resist anslength by foreign organisms and molecules with adverse effects.

- BOT 401: Deals mainly with science, methodology and applications of plant tissue culture methods.
- BOT 402: Highlights the strategies adopted by flowering plants for their reproduction.
- BOT 403: Highlights the interaction of symbionts, pathogens and pest with plants at molecular level.
- BOT 404: Paper is an advancement over BOT 102, deals with more recent development which have taken place in the field of genetics besides providing introduction to methods of plant breeding of improvement of crop plants.
- BOT 405: Demonstration and management of crop diversity for meeting human for requirement forms care of this paper.
- BOT 406: Deals with recent developments in plant systematic and phylogenetics.
- BOT 407: Highlights selected topic in plant cell biology along with the tolls of methods used.
- BOT 408: Deals with selected topics of high important plant Physiology and Biochemistry.
- BOT 409: Each student complies a dissertation on a topic mutually agreed between him/her and a faculty member, who asks as a mentor. The objective is to train students in basics of research, literature recession, analysis and expression of their understanding of the topic in their own words.