

**RAYAT SHIKSHAN SANSTHA'S
SHREE SADGURU GANGAGEER MAHARAJ SCINCE, GAUTAM ARTS & SANJIVANI
COMMERCE COLLEGE, KOPARGAON DIST AHMEDNAGAR**

Program Outcomes, Program Specific Outcomes and Course Outcome

Department of Botany

Program outcome :M.Sc. (Botany)	
PO1	<ul style="list-style-type: none">• Student can identify and classify all plant groups from algae to angiosperms, also understand the evolutionary relationship and their taxonomic aspects.
PO2	<ul style="list-style-type: none">• Knows the concept, process, physiology, and molecular basis of plant development. Also knows the methods of cultivation & economic importance of various species, millets, leguminous plants, fruits, essential oils, vegetables etc.
PO3	<ul style="list-style-type: none">• Students know about economically important algae, their cultivation and applications and also methods of preparation and application of algal products.
PO4	<ul style="list-style-type: none">• Understand the application of Biopesticides; know about sources, methods and production of biofuel.
PO5	<ul style="list-style-type: none">• Acquired knowledge of fermentation technology and production of fermented products.
PO6	<ul style="list-style-type: none">• In seed technology student gain knowledge about seed structure development, chemical composition, seed production, processing, seed testing, quality control, seed certification and new hybrid variety.
PO7	<ul style="list-style-type: none">• Student learns the basic biostatistics, experimental statistics and bioinformatics.
PO8	<ul style="list-style-type: none">• Students understood plant organism interaction,
PO9	<ul style="list-style-type: none">• To inculcates the scientific temperament in the students and outside the scientific community

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Program Specific outcome: M.Sc. (Botany)	
PSO1	<ul style="list-style-type: none">• Students acquired knowledge through practical work in fields as well as in laboratory.
PSO2	<ul style="list-style-type: none">• Students are exposing to various industrial process by industrial training.
PSO3	<ul style="list-style-type: none">• Project helps for creating research attitude among the post graduate students

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Program Outcomes, Program Specific Outcomes and Course Outcome

Department of Botany

Course Outcomes of M.Sc. (Botany)

Class	Course	Outcome
M.Sc. I	BO.1.1 Cryptogamic Botany:	<ul style="list-style-type: none"> • To study the classification of Bryophytes and Pteridophytes. • Understand the evolutionary relationships between plant groups. • Know about systematic classification & nomenclature. • Knows about taxonomic aspects of Cryptogamic plants.
M.Sc. I	BO.1.2 PLANT PHYSIOLOGY AND BIOCHEMISTRY:	<ul style="list-style-type: none"> • Knows about plant water relations, Transport of solute • Understand physiological aspects of plants. • Study metabolism of plants. • Study plant growth regulators. Flowering, fruiting • Know about agro-Electronics • Know about Enzymes and Biomolecules such as amino acids, carbohydrates, Proteins
M.Sc. I	Genetics and Plant Breeding	<ul style="list-style-type: none"> • Study of Classical genetics • Study of recombination, Linkages and Mutations • Study of Microbial Genetics and Cytogenetics • Study of Different Techniques of Plant Breeding.
M.Sc. I	BO.1.4 Botanical Techniques	<ul style="list-style-type: none"> • Study of microscopy • Study of chromatographic, electrophoretic techniques • Spectroscopic and radioactive techniques • Centrifugation, Electrochemical techniques and immunological techniques

M.Sc. I	BOTANY. BO.2.1 Cryptogac	<ul style="list-style-type: none"> • To study the classification of Algae and Fungi. • Understand the evolutionary relationships between plant groups. • Know about systematic classification & nomenclature. • Knows about taxonomic aspects of Cryptogamic plants.
M.Sc. I	BO.2.2 Cell And Molecular Biology:	<ul style="list-style-type: none"> • Knows about cell structure and cell organelles • Cell Signalling and Cell cycle. • Study of Evolution, Cellular and Molecular evolution.
M.Sc. I	Bo. 2.3 Molecular Biology and genetics Engineering	<ul style="list-style-type: none"> • Study of Structure and properties of Nucleic acid. • Study of Gene structure, Transcription and Translation. • Study of Recombinant DNA technology • Isolation of Gene plant genetic Eng. And different Blotting methods
M.Sc. I	BO.2.4 Plant Ecology and Phytogeography	<ul style="list-style-type: none"> • Study of Relations of Plant with environment • Study of population ecology • Study of ecosystem types. • Study of Phytogeography
M.Sc. II	BOTANY. BO.3.1 SPERMATOPHYTIC BOTANY:	<ul style="list-style-type: none"> • To study the classification of gymnosperm & angiosperms. • Understand the relationship between living & non-living fossil gymnosperms • Know about systematic classification & nomenclature. • Knows about taxonomic aspects of angiosperms.
M.Sc. II	BO.3.2 DEVELOPMENT AND ECONOMIC BOTANY:	<ul style="list-style-type: none"> • Knows the concept, features & process of plant development. • Understand embryological aspects of development. • Know about the polyembryony, apomixis, parthenogenesis etc. • They also understand physiology, molecular basis of development • Know about various spices, millets, leguminous crop plants and their economic importance.

M.Sc. II	BO.3.3 INDUSTRIAL BOTANY-1	<ul style="list-style-type: none"> • Gain idea about economically important algae their cultivation & application. • Gain knowledge about methods of preparation & applications of biopesticides. • Understand floriculture & its importance. • Get ideas about different types of fruits. • Knows methods, processing of preservation of fruits.
M.Sc. II	BO.3.4 ADVANCED ANGIOSPER MS	<ul style="list-style-type: none"> • Gain scientific knowledge of modern trends in Angiosperm taxonomy • Understanding Phytogeography, ecology, genetics and taxonomy related to angiosperms. • Gain knowledge about molecular systematics, ultrasystematics • Study of morphological variations, systematic position, interrelationships of different plant families
M.Sc. II	BO.4.1- COMPUTATIO NAL BOTANY	<ul style="list-style-type: none"> • Know the basic terms and test of hypothesis in biostatistics. • Understand the technical experimental statistics. • Know the concept of bioinformatics. • To know the concept of sampling methods and analysis of biostatistical data in Botany.
M.Sc. II	Bo.4.2 Plant Organism Interaction	<ul style="list-style-type: none"> • Understand various kinds of plant-plant interaction like epiphytic plant, parasitic plant and Plant association. • Understand the interaction between herbivorous, carnivorous, and omnivores organisms. • Know the symbiotic association between various organism like lichen, mycorrhizae etc. • Understand the mechanism of seed dispersal and pollination.

M.Sc. II	BO.4.3- Industrial Botany-II	<ul style="list-style-type: none"> • Know the concept, scope and importance of herbal technology. • To study the various type of plants such as Aromatic, medicinal etc. • Understand the floriculture and its importance. • Get ideas of gardening methods and landscaping. • Gain knowledge about Plant tissue culture techniques. • Know the ideas about fruit preservations.
M.Sc. II	BO.4.4- PLANT PATHOLOGY	<ul style="list-style-type: none"> • Know the concept, scope and importance of Plant pathology. • Understand courses of disease development. • Account of Plant disease classification.