

Dr. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, CHHATRAPATI SAMBHAJINAGAR. **DEPARTMENT OF BOTANY**

M.Sc. Botany Program Outcome Matrix

Required Courses and Course Outcomes	M.Sc. Botany Course Program Outcomes Semester: IV												
	Foundational Knowledge	Research and Analytical Skills	Problem-Solving and Critical Thinking	Practical and Technical Proficiency	Communication Skills	Ethical and Social Responsibility	Teamwork and Collaboration	Entrepreneurship and Innovation	Lifelong Learning	Global and Indian Perspectives	Application of Botany	Career Readiness	
Semester: IV													
SAD266504T													
Bioprospecting and Plant													
Resource Utilization													
CO1: Comprehensive Understanding	✓					√							
of Bioprospecting Practices and													
Regulations													
CO2: Proficiency in Marine and	✓	√		✓			✓	✓	✓	✓			
Microbial Bioprospecting Techniques													
CO3: Expertise in the Utilization of	✓		✓	✓	✓						√	✓	
Plant Resources for Diverse													
SAD266514T													
Pharmacognosy													
CO1: In-depth Knowledge of						✓							
Phytochemistry and Pharmacognosy													
Fundamentals													
CO2: Proficiency in the Identification	✓	✓		✓						✓	✓		
and Applications of Plant Metabolites													
CO3: Practical Skills in the	✓		✓	✓	✓		✓	✓	✓	✓	√	✓	
Utilization and Industrial Application													
of Medicinal Plants													
SAD266524T													
Plant Physiology and													
Metabolism													
CO1: Comprehensive Understanding	✓	√											
of Plant Water Relations and													
Transport Mechanisms													
CO2: In-Depth Knowledge of									✓	✓	✓		
Enzyme Function and Regulation													
CO3: Proficiency in Photosynthesis,	✓			✓	✓	√	√					√	
Respiration, and Nitrogen													
Metabolism mechanism													
SAD266504P													

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Bioprospecting and Plant												
Resource Utilization												
CO1: Proficient Identification and	✓			✓		✓						
Analysis of Plant Resources												
CO2: Competence in Phytochemical	✓	✓			√					~		
and Biological Assays	✓		✓	✓			 	✓	√		✓	/
CO3: Practical Experience and Application of Plant Resources in	•		•	¥			· ·	•	•		•	Y
Industry and Research												
SAD266514P												
Pharmacognosy												
CO1: Proficient in Phytochemical	✓		✓		✓			✓				✓
Analysis and Testing												
CO2: Expertise in Pharmacognostic	✓	✓		✓		✓	✓			✓		
Procedures for Plant Drug												
Standardization												
CO3: Competence in Extraction and				✓								
Quality Assessment of Plant Materials												
Materials												
SAD266524P												
Plant Physiology and												
Metabolism												
CO1: Proficiency in Protein and	✓											
Amino Acid Analysis												
CO2: Expertise in Enzyme Activity	✓			√	✓	✓			✓	✓		✓
and Immobilization Techniques												
CO3: Competence in Extraction, Estimation, and Analysis of Plant	✓	√	√	✓			✓	√	√		✓	✓
Metabolites												
SAD266534P												
Genetic Engineering and												
Bioinformatics - II												
CO1: Mastery of Bioinformatics	✓	√					✓					
Databases and File Formats												
CO2: Proficiency in Sequence	✓	✓			✓	✓		✓		✓		✓
Analysis and Structural Prediction												
CO3: Competence in Literature and	✓		✓	√					✓	✓	✓	
Database Searches					,							
SBD266544T					√							
Advanced Genetics - II												

CO1: Comprehensive Understanding	✓								✓			
of Molecular Genetic Processes												
CO2: Proficiency in Gene Regulation						✓				✓		✓
and Human Genetics												
CO3: Insight into Population	✓		✓	✓			✓	✓			✓	
Genetics and Cell Communication												
SBD266544P												
Advanced Genetics - II												
CO1: Comprehensive Understanding	✓		✓							✓		
of Molecular Genetic Processes												
CO2: Proficiency in Gene Regulation	✓	✓	✓	✓	✓		√			✓		
and Human Genetics												
CO3: Insight into Population	✓			✓		✓		✓	√		✓	√
Genetics and Cell Communication												
SBD266554T												
Mycology and Plant												
Pathology - IV												
CO1: Expertise in Seed Pathology	✓				✓							
and Seed Health Management												
CO2: Proficiency in Mycotoxins and		√		✓		✓			✓	✓		
Plant Defense Mechanisms												
CO3: Understanding and Application	✓		✓	√	✓		✓	✓			✓	✓
of Integrated Pest Management												
(IPM)												
SBD266554P												
Mycology and Plant												
Pathology - IV												
CO1: Proficiency in Fungal Isolation	✓		✓							✓		
and Identification												
CO2: Expertise in Mycotoxin	√	✓	✓	√	✓		✓			✓		
Production and Bioassay												
CO3: Application of Endophytic	✓			√		✓		✓	√		✓	✓
Fungi and Field Experience												
SBD266564T												
Taxonomy of Angiosperms –												
IV												
CO1: Competence in Taxonomic	✓				✓							
Character Assessment and Feature												
Study												
CO2: Skills in Numerical Taxonomy		✓		✓		✓			✓	✓		
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and Nomenclature												
CO3: Expertise in Fossil and Modern	✓		√	✓	√		√	✓			✓	✓
Plant Identification												
SBD266564P												
Taxonomy of Angiosperms –												
IV												
CO1: Competence in Taxonomic	✓								✓			✓
Character Assessment and Feature												
Study												
CO2: Skills in Numerical Taxonomy			✓	✓	✓		✓	✓		✓	✓	✓
and Nomenclature												
CO3: Expertise in Fossil and Modern	✓	✓		✓		✓			✓	✓		
Plant Identification												
SBD266574T												
Advanced Plant Physiology												
and Biochemistry - IV												
CO1: Understanding of Genetic	✓			✓								
Information and Gene Technology												
CO2: Knowledge of Senescence and	✓	✓			✓	✓		✓			✓	
Microbial Physiology												
CO3: Proficiency in Enzyme	✓						✓		✓	✓		✓
Technology and Crop Productivity												
SBD266574P												
Advanced Plant Physiology												
and Biochemistry - I												
CO1: Proficiency in Biochemical and	✓			✓		✓		✓	✓	✓		
Physiological Analyses												
CO2: Competence in Enzyme Assays		✓			✓						✓	✓
and Chemical Tests												
CO3: Expertise in Crop Plant Studies	✓						✓				✓	√
and Nutritional Analysis												
SRD266584P												
FP (Field Project)												