

**Guru Ghasidas Vishwavidyalaya (A Central University)  
Bilaspur - 495009 (C.G.)**

**DEPARTMENT OF BOTANY**

**POs Under-Graduate Programme**

**Programme Outcomes (POS)**

<b><u>PO1</u></b>	<b>Knowledge:</b> To meet the professional requirements Knowledge will be provided on basics and advance fields of the core and applied fields
<b><u>PO2</u></b>	<b>Critical Thinking:</b> Special skill for critical thinking on contextual knowledge of living beings/ organisms, non-living components and environmental basis of life, enabling the students for critical analysis of day-to-day problems.
<b><u>PO3</u></b>	<b>Skill &amp; Application Development:</b> Understanding of application of biological materials in food, health, medicine & Environment for sustainable development of the society, development of skill-based knowledge on theory and methodology for use in descriptive and inferential statistical tools and techniques.
<b><u>PO4</u></b>	<b>Ethics:</b> Internalisation of and sensitiveness to sound professional ethics for use to solve societal problems.
<b><u>PO5</u></b>	<b>Inter-disciplinary &amp; Multi-disciplinary Approach:</b> Understanding of the vital connections within and among the flora, fauna and the physical environment so is to enable to integrate and synthesized
<b><u>PO6</u></b>	<b>Problem Solving &amp; Employability:</b> Special skill through vocational trainings, field visits, entrepreneurial and career development approach in research and development issues in the society.

**B.Sc. Botany Hon's** What is ✓?

Sem	Course	Code	<u>PO1</u>	<u>PO2</u>	<u>PO3</u>	<u>PO4</u>	<u>PO5</u>	<u>PO6</u>
<b>Core Courses</b>								
<u>I</u>	Phycology and Microbiology	BOUATT1	✓	✓	✓	✓	✓	✓
<u>I</u>	Biomolecules and Cell Biology	BOUATT2	✓	✓	✓		✓	
<u>II</u>	Mycology and Phytopathology	BOUBTT3	✓	✓	✓		✓	✓
<u>II</u>	Archegoniate: Bryophytes, Pteridophytes, Gymnosperms	BOUBTT4	✓					
<u>III</u>	Anatomy od Angiosperms	BOUCTT5	✓	✓	✓			✓
<u>III</u>	Economic Botany and Plant Resource Utilization	BOUCTT6	✓	✓	✓	✓		✓
<u>III</u>	Genetics and Cytogenetics	BOUCTT7	✓	✓	✓		✓	✓
<u>IV</u>	Molecular Biology	BOUDTT8	✓	✓	✓		✓	✓

<u>IV</u>	Plant Ecology and Phytogeography	BOUDDT9	✓	✓	✓	✓	✓	✓
<u>IV</u>	Plant Systematics	BOUDDT10	✓	✓	✓	✓	✓	✓
<u>V</u>	Plant Physiology	BOUETT11	✓	✓	✓			
<u>V</u>	Plant Metabolism	BOUETT12	✓	✓	✓			
<u>VI</u>	Biodiversity and Conservation	BOUFTT13	✓	✓	✓	✓	✓	✓
<u>VI</u>	Reproductive Biology of Angiosperms	BOUFTT14	✓	✓	✓		✓	
<b>Discipline Specific Elective Courses</b>								
	Plant Biotechnology and Genetic Engineering	BOUATD1	✓	✓	✓	✓	✓	✓
	Plant Biochemistry	BOUATD2	✓	✓	✓			✓
	Research Methodology	BOUATD3	✓	✓	✓	✓	✓	✓
	Biostatistics	BOUATD4	✓	✓	✓	✓	✓	✓
	Natural Resource Management	BOUATD5	✓	✓	✓	✓	✓	✓
	Industrial and Environmental Microbiology	BOUATD6	✓	✓	✓	✓	✓	✓
	Aquatic Botany	BOUATD7	✓		✓	✓	✓	✓
	Bioinformatics	BOUATD8	✓	✓	✓		✓	✓
	Elements of Plant Breeding	BOUATD9	✓	✓	✓		✓	✓
	Bio-Analytical Techniques	BOUATD10	✓	✓	✓	✓	✓	✓
<b>Generic Elective Courses</b>								
	Food Science	BOUCTG1	✓	✓	✓	✓	✓	✓
	Community Forestry	BOUCTG2	✓	✓	✓	✓	✓	✓
	Seed Technology	BOUCTG3	✓		✓	✓	✓	✓
	Industrial Microbiology	BOUCTG4	✓	✓	✓	✓	✓	✓
	Plant Microbes Interaction	BOUCTG5	✓	✓	✓	✓	✓	✓
	Global Climate Change	BOUCTG6	✓	✓	✓	✓	✓	✓
	Plant Diversity and Human Welfare	BOUCTG7	✓	✓	✓	✓	✓	✓
	Environmental Protection	BOUCTG8	✓	✓	✓	✓	✓	✓
	Environmental Toxicity	BOUCTG9	✓	✓	✓	✓	✓	✓
	Environmental Microbiology	BOUCTG10	✓	✓	✓	✓	✓	✓
	Algal Biotechnology	BOUCTG11	✓	✓	✓	✓		✓
<b>Ability Enhancement Courses</b>								
	Mushroom Culture Technology	BOUATA1	✓	✓	✓	✓	✓	✓
	Medicinal Botany	BOUATA2	✓	✓	✓	✓	✓	✓
	Plants in Traditional Systems of Medicine	BOUATA3	✓	✓	✓	✓		✓
	Good Laboratory Practices	BOUATA4	✓		✓		✓	
	Intellectual Property Rights	BOUATA5	✓	✓	✓	✓	✓	✓
	History of Indian Science	BOUATA6	✓				✓	

Skill Enhancement Courses								
	Botanical Garden and Landscaping	BOUATL1	✓	✓	✓	✓	✓	✓
	Agriculture and Food Microbiology	BOUATL2	✓	✓	✓	✓	✓	✓
	Biofertilizers	BOUATL3	✓	✓	✓	✓	✓	✓
	Herbal Technology	BOUATL4	✓	✓	✓	✓	✓	✓
	Environmental Impact Analysis	BOUATL5	✓	✓	✓	✓	✓	✓
	Floriculture	BOUATL6	✓		✓	✓	✓	✓
	Forensic Botany	BOUATL7	✓	✓	✓	✓	✓	✓

### POs Post-Graduate Programme

#### Programme Outcomes (POS)

<b>PO1</b>	<b>Knowledge:</b> Knowledge will be provided on basics and advance fields of the core and applied disciplines to fulfil the professional requirements
<b>PO2</b>	<b>Critical Thinking:</b> Develop critical thinking on appropriate knowledge of <u>living beings/ organisms, non-living components and environmental basis of life, which will enable students for critical analysis of day-to-day problems.</u>
<b>PO3</b>	<b>Skill &amp; Application Development:</b> Skill based knowledge on theoretical and methodological understandings of use of different descriptive and inferential statistical tools and techniques for application of biological materials in food, health, medicine & Environment for sustainable development of the society.
<b>PO4</b>	<b>Inter-disciplinary &amp; Multi-disciplinary Approach:</b> Understanding of the vital connections of flora, fauna and the physical environment so is to enable to integrate and synthesized
<b>PO5</b>	<b>Ethics:</b> Internalisation of and sensitiveness to sound professional ethics for use in day-to-day life in the society.
<b>PO6</b>	<b>Problem Solving &amp; Employability:</b> Special skill through vocational trainings, field visits, entrepreneurial and career development approach to develop capability to handle various problems and development of scientific temperament in research and development issues in the society.

#### M.Sc Botany:

Sem	Course	Code	<u>PO1</u>	<u>PO2</u>	<u>PO3</u>	<u>PO4</u>	<u>PO5</u>	<u>PO6</u>
<b>Core Courses</b>								
I	Advances in Virus, Bacteria and Algae	BOPATT1	✓		✓	✓	✓	
I	Applied Mycology and Advance Phytopathology	BOPATT2	✓	✓	✓	✓	✓	✓

I	Advances in Bryophytes, Pteridophytes and Gymnosperms	BOPATT3	✓		✓		✓	
I	Ecosystem Services and Biodiversity	OPNBO01	✓	✓	✓	✓	✓	✓
II	Cell Biology and Molecular Biology	BOPBTT4	✓	✓	✓	✓	✓	✓
II	Taxonomy of Angiosperm	BOPBTT5	✓	✓	✓		✓	
II	Plant Biochemistry	BOPBTT6	✓	✓	✓		✓	✓
II	Ecology and Environment	BOPBTT7	✓	✓	✓	✓	✓	✓
II	Research Methodology	BOPBTT11	✓	✓	✓	✓	✓	✓
III	Plant Anatomy and Reproductive Biology	BOPCTT8	✓	✓	✓		✓	
III	Genetics and Cytogenetics	BOPCTT9	✓	✓	✓	✓	✓	✓
III	Plant Physiology	BOPCTT10	✓	✓	✓		✓	
<b>Discipline Specific Elective Courses - BASKET 1</b>								
III	Algae, Environment and human Welfare		✓	✓	✓	✓	✓	✓
III	Biofertilizer and Biopesticides Technology		✓	✓	✓	✓	✓	✓
III	Bioinformatics and Evolutionary Biology		✓	✓	✓	✓	✓	✓
III	Environmental Microbiology		✓	✓	✓	✓	✓	✓
III	Herbal Product Development and Formulation		✓	✓	✓	✓	✓	✓
III	Microbial Physiology		✓	✓	✓	✓	✓	✓
III	Plant Stress Biology		✓	✓	✓	✓	✓	✓
III	Environmental biology		✓	✓	✓	✓	✓	✓
<b>DSE - BASKET 2</b>								
IV	Agricultural Microbiology		✓	✓	✓	✓	✓	✓
IV	Biodiversity and Conservation		✓	✓	✓	✓	✓	✓
IV	Ethnobotany and Traditional knowledge		✓	✓	✓	✓	✓	✓
IV	Herbal Cosmetics		✓	✓	✓	✓	✓	✓
IV	Microbial Technology		✓	✓	✓	✓	✓	✓
IV	Plant Propagation and Nursery Development		✓	✓	✓	✓	✓	✓
IV	Plant Tissue Culture and Application		✓	✓	✓	✓	✓	✓
<b>DSE - BASKET 3</b>								
IV	Environmental Pollution		✓	✓	✓	✓	✓	✓
IV	Ethno-Pharmacognosy and Nutraceuticals		✓	✓	✓	✓	✓	✓
IV	Food Microbiology		✓	✓	✓	✓	✓	✓

<u>IV</u>	Global Change Biology		✓	✓	✓	✓	✓	✓
<u>IV</u>	Microbial Genetics		✓	✓	✓	✓	✓	✓
<u>IV</u>	Plant Functional Genomics		✓	✓	✓	✓	✓	✓
<u>IV</u>	Plant Systematics		✓	✓	✓	✓	✓	✓
<u>IV</u>	Plant Diversity, Uses and Conservation		✓	✓	✓	✓	✓	✓

**Head**  
**Department of Botany**