

S.V.A. GOVERNMENT COLLEGE, SRIKALAHASTI
DEPARTMENT OF BOTANY
Course Outcomes (COs) & Program Outcomes (POs)

Program Outcomes (POs):

Upon completion of the B.Sc. Botany program, students will be able to:

- PO1:** Apply knowledge of fundamental concepts of plant science across sub-disciplines.
- PO2:** Demonstrate laboratory skills and scientific methodology in biological research.
- PO3:** Analyze biological data and interpret scientific literature effectively.
- PO4:** Communicate scientific knowledge clearly and accurately.
- PO5:** Address environmental and biodiversity issues with a sustainable approach.
- PO6:** Demonstrate ethical responsibility and awareness of societal impact of biological sciences.

Program Specific Outcomes (PSOs):

- PSO1:** Gain core knowledge of taxonomy, anatomy, physiology, and ecology of plants.
 - PSO2:** Understand evolutionary relationships among plant groups, especially in lower cryptogams.
 - PSO3:** Utilize plant knowledge in agriculture, biotechnology, and environmental conservation.
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Course Title: Non-Vascular Plants

Semester: II

Program: B.Sc. Botany Minor

Course Outcomes (COs):

By the end of this course, students will be able to:

- CO1:** Understand the diversity, classification, and life cycles of non-vascular plants including algae, fungi, lichens, and bryophytes.
- CO2:** Describe the morphology, anatomy, and reproduction of representative genera of non-vascular plants.
- CO3:** Evaluate the ecological and economic significance of algae, fungi, and bryophytes.
- CO4:** Differentiate evolutionary trends from simple thalloid forms to more complex gametophytes.
- CO5:** Analyze the role of non-vascular plants in ecosystems and biotechnological applications.

CO-PO & CO-PSO Mapping Table

Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	3	2	2	1	2	1	3	3	2
CO2	3	3	2	2	1	1	3	3	2
CO3	2	2	3	2	3	2	2	2	3
CO4	3	2	2	1	2	1	2	3	2
CO5	2	2	3	2	3	3	2	2	3

Rating Scale:

3 – High Correlation

2 – Moderate Correlation

1 – Low Correlation

0 – No Correlation

Course Title: Vascular Plants**Semester: III****Course Type:** Core Paper for B.Sc. Botany**Credits:** 4

Course Outcomes (COs):

By the end of this course, students will be able to:

- **CO1:** Understand the general characteristics, classification, and evolutionary trends in Pteridophytes and Gymnosperms.
- **CO2:** Describe the morphology, anatomy, reproduction, and life cycle of representative genera of Pteridophytes.

- **CO3:** Explain the structure and reproductive features of Gymnosperms with selected examples.
- **CO4:** Analyze the evolutionary significance of seed habit and heterospory in vascular plants.
- **CO5:** Compare and contrast the life cycles and adaptations of Pteridophytes and Gymnosperms.

CO-PO and CO-PSO Mapping Matrix:

COs	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	3	2	2	1	2	2	3	2	2
CO2	3	3	2	2	2	2	3	3	2
CO3	3	2	2	2	2	3	3	3	3
CO4	3	3	2	1	2	2	2	2	3
CO5	3	2	2	2	2	3	3	2	3

Legend:

3 = Strongly correlated
 2 = Moderately correlated
 1 = Slightly correlated
 0 = Not correlated

Course: Anatomy, Embryology of Angiosperms

Semester: IV

Program: B.Sc. Botany Minor

Course Outcomes (COs)

After completing this course, students will be able to:

CO1: Describe the internal structure and functional organization of plant tissues and organs.

CO2: Identify and distinguish various types of plant tissues (meristematic, permanent, complex).

CO3: Analyze the anatomical adaptations in xerophytes, hydrophytes, and mesophytes.

CO4: Understand the process of reproduction in angiosperms, including microsporogenesis and megasporogenesis.

CO5: Describe fertilization, endosperm development, embryo formation, and seed maturation in angiosperms.

CO6: Apply knowledge of plant anatomy and embryology in plant taxonomy, biotechnology, and crop improvement.

CO-PO Mapping Matrix

Course Outcomes (COs)	PO1	PO2	PO3	PO4	PO5	PO6	PSO1	PSO2	PSO3
CO1	3	2	2	1	1	1	3	3	2
CO2	3	2	2	1	1	2	3	3	2
CO3	2	3	2	1	3	2	3	3	3
CO4	3	2	2	1	1	2	3	2	3

CO5	3	2	2	1	2	3	3	2	3
CO6	3	3	3	2	2	3	3	3	3

Legend:

3 – Strongly mapped

2 – Moderately mapped

1 – Slightly mapped

0 – Not mapped

Course Title: Ecology and Biodiversity

Semester: IV

Program: B.Sc. Botany

Course Outcomes (COs):

1. **CO1:** Understand the principles of ecology and ecosystem dynamics.
2. **CO2:** Explain biotic and abiotic components of the environment and their interactions.
3. **CO3:** Analyze biodiversity at genetic, species, and ecosystem levels and its conservation.
4. **CO4:** Evaluate ecological pyramids, energy flow, and biogeochemical cycles.
5. **CO5:** Develop awareness on environmental issues and sustainable development goals.

CO-PO and CO-PSO Mapping Matrix

Course Outcomes (COs)	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
CO1	3	2	2	2	1	3	2	2
CO2	3	2	1	3	1	3	3	2
CO3	3	2	1	3	3	3	3	3
CO4	2	3	2	2	2	2	2	3
CO5	2	2	3	3	3	2	3	2

Legend:

3 = Strongly correlated
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