



SIR C R REDDY COLLEGE FOR WOMEN

(Affiliated to Adikavi Nannaya University, Rajamahendravaram)

Vatluru (Post), Pedapadu Mandal, Eluru (A.P)

DEPARTMENT OF BOTANY

COURSE OUTCOMES

BSC-BOTANY

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B.Sc-Botany	Semester:I	Credits:4
Course: I	Fundamentals of Microbes and Non-vascular Plants	Hrs/Wk:5

Course Outcomes:

On successful completion of this course, the students will be able to:

Co1

Explain origin of life on the earth.

Co2

Illustrate diversity among the viruses and prokaryotic organisms and can categorize them

Co3

Classify fungi, lichens, algae and Bryophytes based on their structure, reproduction and life cycles.

Co4

Analyze and ascertain the plant disease symptoms due to viruses, bacteria and fungi

Co5

Recall and explain the evolutionary trends among amphibians of plant kingdom for their shift to land habitat.

B.Sc.	Semester-I	Credits:1
Course: 1(L)	Fundamentals of Microbes and Non-vascular Plants -Lab	Hrs/Wk: 2

Course Outcomes:

On successful completion of this practical course, student shall be able to;

Co1

Demonstrate the techniques of use of lab equipment, preparing slides and identify the material and draw diagrams exactly as it appears.

Co2

Observe and identify microbes and lower groups of plants on their own

Co3.

Demonstrate the techniques of inoculation, preparation of media etc.

Co4

Identify the material in the permanent slides etc.

B.Sc.	Semester-II	Credits: 4
Course:2	Basics of Vascular plants and Phytogeography	Hrs/Wk:4

Course Outcomes:

On successful completion of this course, the students will be able to:

Co1

Classify and compare Pteridophytes and Gymnosperms based on their morphology, anatomy, reproduction and lifecycles

Co2

Justify evolutionary trends in tracheophytes to adapt for land habitat.

Co3

Explain the process of fossilization and compare the characteristics of extinct and extant plants.

Co4

Critically understand various taxonomical aids for identification of Angiosperms.

Co5

Analyze the morphology of the most common Angiosperm plants of their localities and recognize their families.

B.Sc.	Semester-II	Credits:1
Course:2(L)	Basics of Vascular plants and Phytogeography-Lab	Hrs/Wk: 2

Course Outcomes :

On successful completion of this course students shall be able to:

Co1

Demonstrate the techniques of section cutting, preparing slides, identifying of the material and drawing exact figures.

Co2

Compare and contrast the morphological, anatomical and reproductive features of vascular plants.

Co3

Identify the local angiosperms of the families prescribed to their genus and species level and prepare herbarium

Co4

Exhibit skills of preparing slides, identifying the given twigs in the lab and drawing figures of plant twigs, flowers and floral diagrams as they are.

Co5

Prepare and preserve specimens of local wild plants using herbarium techniques.

B.Sc.	Semester- III	Credits: 4
Course:3	Anatomy and Embryology of Angiosperms, Plant Ecology and Biodiversity	Hrs/Wk:4

Course Outcomes:

On successful completion of this course, the students will be able to;

Co1

Understand on the organization of tissues and tissue systems in plants.

Co2

Illustrate and interpret various aspects of embryology.

Co3

Discuss the basic concepts of plant ecology, and evaluate the effects of environmental and biotic factors on plant communities.

Co4

Appraise various qualitative and quantitative parameters to study the population and community ecology.

Co5

Correlate the importance of biodiversity and consequences due to its loss.

B.Sc.	Semester-III	Credits:1
Course:3(L)	Anatomy and Embryology of Angiosperms,PlantEcologyand Biodiversity -Lab	Hrs/Wk: 2

Course Outcomes:

On successful completion of this practical course students shall be able to:

Co1

Get familiarized with techniques of section making, staining and microscopic study of vegetative, anatomical and reproductive structure of plants.

Co2

Observe externally and under microscope, identify and draw exact diagrams of the material in the lab.

Co3

Demonstrate application of methods in plant ecology and conservation of biodiversity and qualitative and quantitative aspects related to populations and communities of plants.

BSc botany	Semester:IV	Credits:4
Course:4	Plant Physiology and Metabolism	Hrs/Wk:4

Course Outcomes:

On successful completion of this course, the students will be able to;

Co1

Comprehend the importance of water in plant life and mechanisms for transport of water and solutes in plants.

Co2

Evaluate the role of minerals in plant nutrition and their deficiency symptoms.

Co3

Interpret the role of enzymes in plant metabolism.

Co4

Critically understand helight reactions and carbon assimilation processes responsible for synthesis of food in plants.

Co5

Analyze the biochemical reactions in relation to Nitrogen and lipid metabolisms.

B.Sc.	Semester-IV	Credits:1
Course:4(L)	Plant Physiology and Metabolism -Lab	Hrs/Wk: 2

Course outcomes:

On successful completion of this practical course,students shall be able to:

Co1

Conduct lab and field experiments pertaining to Plant Physiology,that is biophysical and biochemical processes using related glassware, equipment , chemicals and plant material.

Co2

Estimate the quantities and qualitative expressions using experimental results and calculations

Co3

Demonstrate the factors responsible for growth and development in plants.

B.Sc.	Semester-IV	Credits: 4
Course:5	Cell Biology,Genetics and Plant Breeding	Hrs/Wk:4

Course Outcomes:

On successful completion of this course, the students will be able to:

Co1

Distinguish prokaryotic and eukaryotic cells and design the model of a cell.

Co2

Explain the organization of a eukaryotic chromosome and the structure of genetic material

Co3.

Demonstrate techniques to observe the cell and its components under a microscope.

Co4

Discuss the basics of Mendelian genetics, its variations and inheritance of traits in living beings.

Co5

Elucidate the role of extra-chromosomal genetic material for inheritance of characters

B.Sc.	Semester-IV	Credits:1
Course:5(L)	Cell Biology,Genetics and Plant Breeding-Lab	Hrs/Wk: 2

Course Outcomes:

After successful completion of this practical course the student shall be able to:

Co1

Show the understanding of techniques of demonstrating Mitosis and Meiosis in the laboratory and identify different stages of cell division.

Co2

Identify and explain with diagram the cellular parts of a cell from a model or picture and prepare models

Co3

Solve the problems related to crosses and gene interactions.

Co4

Demonstrate plant breeding techniques such as emasculation and bagging

B. Sc	Semester-V (Skill Enhancement Course- Elective)	Credits:4
Course:6C	Plant Tissue Culture	Hrs/Wk: 4

Course outcomes

Students at the successful completion of the course will be able to:

Co1

Comprehend the basic knowledge and applications of plant tissue culture.

Co2

Identify various facilities required to setup a plant tissue culture laboratory.

Co3

Acquire a critical knowledge on sterilization techniques related to plant tissue culture.

Co4

Demonstrate skills of callus culture through hands on experience.

Co5

Understand the bio transformation technique for production of secondary metabolites.

B. Sc	Semester-V(Skill Enhancement Course- Elective)	Credits:1
Course:6C	Plant Tissue Culture-Lab	Hrs/Wk: 2

Course Outcomes:

On successful completion of this practical course, student will be able to:

Co1

List out identify and handle various equipment in plant tissue culture lab.

Co2

Learn the procedures of preparation of media.

Co3

Demonstrate skills on inoculation, establishing callus culture and Micropropagation.

Co4

Acquire skills in observing and measuring callus growth.

Co5

Perform some techniques related to plant transformation for secondary Metabolite production.

B. Sc	Semester-V(Skill Enhancement Course- Elective)	Credits:4
Course:7C	Mushroom Cultivation	Hrs/Wk: 4

Course Outcomes:

Students at the successful completion of the course will be able to:

Co1

Understand the structure and life of a mushroom and discriminate edible and poisonous mushrooms.

Co2

Identify the basic infrastructure to establish a mushroom culture unit.

Co3

Demonstrate skills preparation of compost and spawn.

Co4

Acquire a critical knowledge on cultivation of some edible mushrooms.

Co5

Explain the methods of storage, preparation of value-added products and marketing.

B. Sc	Semester-V(Skill Enhancement Course- Elective)	Credits:1
Course:7C	Mushroom Cultivation -Lab	Hrs/Wk: 2

Course Outcomes:

On successful completion of this practical course, student will be able to:

Co1

Identify and discriminate different mushrooms based on morphology.

Co2

Understand facilities required for mushroom cultivation.

Co3

Demonstrate skills on preparation of spawn, compost and casing material.

Co4

Exhibit skills on various cultivation practices for an edible mushroom.
