DEPARTMENT OF BOTANY

COURSE OUTCOME

Botany Honours

CC1: Students are introduced to the algal and microbial diversity as well as to the characteristics of viruses. Economic aspect of algae and microbes is also taken into consideration.

CC2: The course covers fungi, lichens and plant diseases. Fungi are commercially noteworthy. A course on various aspect of plant diseases is also very helpful to identify common plant diseases and their control measures.

CC3: Students are exposed to Plant Anatomy and its intricate structural details of vascular plants and it includes issues how anatomy is useful in forensic studies and in pharmacognosy.

CC4: It deals with the Archegoniatae- the group of plants having the female sex organ archegonium. It includes non-vascular cryptogams, vascular cryptogams and gymnosperm diversity. Economic importance of Archegoniatae is also taken into consideration.

CC5: Students are introduced to the geological history of our planet with a glimpse of the vegetation of the past. In palynology, students learn how to determine authenticity of honey. Co-relation between fossils and its corresponding present-day representatives.

CC6 & CC7: The most dominant plant community in our planet is the flowering plants having 0.3 million species. These two core courses introduce the students to the enormous diversity and economic potential of flowering plants. This is an important area of botany which deals Plant Nomenclature and Classification.

CC8: Students learn different aspects of Ecology, Plant Geography and evolution.

CC9: It deals with all the aspects of Economic Botany including centre of origin of crop plants, crop evolution, crop domestication, crop introduction, loss of genetic diversity and germplasm conservation. It also deals with different plants which are essential for mankind.

CC10: It exposes the students to the fundamentals of genetics i.e., how genes and gene traits are passed down generation wise.

CC11: The core course provides a glimpse of cell and molecular biology with an introduction to the DNA recombinant technology.

CC12: Students are introduced to the basics of Biochemistry which explores the chemistry of living organism

CC13 & CC14: Students learn Plant Physiology and Plant Metabolism in details.

SEC: Skill Enhancement Courses have applied objectivity and these courses help the students to develop specialized skill in selected fields like Phycology, Mycology, Microbiology & Mushroom culture technology.
DSE: Discipline Specific Elective Courses train the students various applied aspects like Industrial & Environmental Microbiology, Medicinal and Ethnobotany, Horticultural Practices & Post-Harvest Technology and Natural Resource Management.

Botany General
CC1 & CC2: These two core courses introduce the students to the plant diversity.
CC3: It includes Cell biology, Genetics & Microbiology.
CC4: Students are introduced to Plant Physiology & Metabolism.
SEC: Skill Enhancement Course includes Plant Biotechnology.
DSE: Two Courses offered to the students-Phytochemistry and Medicinal Botany & Economic Botany.

PROGRAMME OUTCOME
The Department conducts:
1. Local excursions to different localities
2. Excursion to a different phytogeographical region.
3. Excursion to the Acharya Jagadish Chandra Bose Indian Botanic Gardens.
4. Excursion to the Central National Herbarium.
5. Excursion to the Alipore Agri-horticultural Societies Garden.
6. Excursion to Nurseries, Gardens, Standing crops & Vegetable Gardens.
7. Excursion to Industrial Fermenter.
8. Excursion to study Forest Cover.
9. Excursion to study plant community structure.
10. Excursion to record effects of pollution on plants.

Objectives of all these programmes include:

- Overall personality development for community living.
- *In situ* study of the plant diversity.
- Economic aspects of plant diversity.
- Collection of a few plant specimens (students never uproot even a herb) for documentation in the form of herbarium sheets.
- Preparation of field notes on the collected plant specimens to record –
    - Name of the specimen
    - Family
    - Habit
    - Habitat
    - Smell of crushed herbage
    - Flower colour
    - Fruit type &
    - Other distinctive morphological characters

- Record of the medicinal or other economic uses of the specimen.

PROGRAMME SPECIFIC OUTCOME

Students in the Programmes with Botany Honours & General develop the skill:

1. To identify different components of plant diversity.
2. To identify economically important plant species.
3. To identify common plant diseases and their control measures.
4. To identify medicinally important plants & secondary metabolites.
5. Mushroom culture technology.
6. Horticultural techniques.
7. Importance of natural Resources & their Sustainable utilization.
8. Importance of Forest Cover
9. Method of Cultivation of crop species.
