



Course Contents for Subjects with Code: BOT

This document only contains details of courses having code **BOT**.



Code	Subject Title	Cr. Hrs	Semester
BOT-101	Botany-I (Plant Diversity)	3	I
Year	Discipline		
1	Botany, Zoology, Chemistry-I		

Syllabus Outline: Comparative study of the different plant groups with representative examples, including Viruses, Bacteria, Algae, Fungi, Lichens, Bryophytes, Pteridophytes and Gymnosperms.

Course Outline:

Comparative study of life form, structure, reproduction and economic signification of

- a. **Viruses** (RNA and DNA types) with special reference to Tobacco Mosaic Virus (TMV).
- b. **Bacteria and Cyanobacteria** (*Nostoc*, *Oscillatoria*).
- c. **Algae:** (*Chlamydomonas*, *Spirogyra*, *Chara*, *Pinnularia*, *Ectocarpus* and *Polysiphonia*).
- d. **Fungi:** (*Mucor*, *Penicillium*, *Phyllactinia*, *Ustilago*, *Puccinia* and *Agaricus*), their effects on crop production and industrial applications.
- e. **Lichens:** (*Physcia*).
- f. **Bryophytes:**
 - i- *Riccia*
 - ii- *Anthoceros*
 - iii- *Funaria*
- g. **Pteridophytes:**
 - i- Fossils and Fossilization
 - ii- Major Groups and their Affinities
 - a. Psilopsida (*Psilotum*)
 - b. Lycopsida (*Selaginella*)
 - c. Sphenopsida (*Equisetum*)
 - d. Pteropsida (*Marsilea*)
 - iii- Seed Habit
- h. **Gymnosperms:** (*Cycas*, *Pinus* and *Ephedra*)

Module Aims: The course is designed to provide an adequate knowledge about basic concept of different plant groups and their phylogenetic relationship.

Learning Strategies:

1. Lectures
2. Group Discussion
3. Laboratory work
4. Seminar/ Workshop

Learning Outcome: Students are expected to familiarize with the morphological and systematic knowledge about different plant groups. They will be able to make use of this knowledge for detailed study in other disciplines.



Assessment Strategies:

1. Lecture Based Examination (Objective and Subjective)
2. Assignments
3. Class discussion
4. Quiz
5. Tests

Books Recommended:

1. **Lee, E. R. (2007).** *Phycology*. (4th Ed.) Cambridge University Press U.K.
 2. **Sambamurty, A.V.S.S. (2005).** *A Textbook of Bryophytes, Pteridophytes, Gymnosperms and Paleobotany*. I.K. International Pvt. Ltd. New Delhi, Bangalore, Mumbai. 573 pp.
 3. **Agrios, G.N. (2004).** *Plant Pathology*. (8th Ed.), Academic Press London.
 4. **Prescott, L.M., Harley, J.P. and Klein, A.D. (2004).** *Microbiology*, (3rd Ed.) WM. C. Brown Publishers.
 5. **Mauseth. J.D. (2003).** *Botany: An Introduction to Plant Biology*. (3rd Ed.) Jones & Bartlett Pub.UK.
 6. **Biswas, C, and Johri, B.M. (1999).** *The Gymnosperms*. Narosa Publishing House. New Delhi and London.
 7. **Alexopoulos, C.J., Mims, C.W. and Blackwell, M. (1996).** *Introductory Mycology*. (4th Ed.) John Wiley and Sons, UK.
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