

**DEPARTMENT OF BOTANY**  
**CURRICULUM PLAN 2022-2023 (ODD SEMESTER)**

**Dr. Monika Keisham**

**Semester I**

**DISCIPLINE SPECIFIC CORE COURSE (BOT-LS-DSC-1): Plant Diversity and Systematics**

<b>Topic</b>	<b>Approximate Schedule (Monthwise)</b>	<b>Assignment/Class Test/Presentation</b>	<b>Suggested Readings</b>
<p>Unit 1: Diversity of Life Classifying the diversity of life: Domains of Life – Eubacteria, Archaea and Eukaryotes</p> <p>Unit 2: Microbes Viruses: General account; Replication, Lytic and Lysogenic cycle; Bacteria: structure, Wall-less forms (L-forms, Mycoplasma), asexual reproduction and genetic recombination.</p>	November-December, 2022	Assignment	<p>1. Alexopoulos, C.J., Mims, C.W., Blackwell, M. (1996). <i>Introductory Mycology</i>, 4th edition. Singapore, John Wiley and Sons (Asia).</p> <p>2. Kumar, H.D. (1999). <i>Introductory Phycology</i>, 2nd edition. Delhi, Delhi: Affiliated East-West. Press Pvt. Ltd.</p> <p>3. Bhatnagar, S.P., Moitra, A. (1996). <i>Gymnosperms</i>. New Delhi, Delhi: New Age</p>
<p>Unit 3: Algae Brief introduction of major classes Blue green, Green, Brown and Red algae. Diagnostic features of identification; morphology, reproduction and classification with special reference to <i>Nostoc</i>, <i>Volvox</i>, and <i>Spirogyra</i>.</p>	January, 2023	Assignment	<p>International (P) Ltd Publishers.</p> <p>4. Parihar, N.S. (1991). <i>An introduction to Embryophyta</i>. Vol. I. Bryophyta. Prayagraj: U.P.: Central Book Depot.</p> <p>5. Pelczar, M.J. (2001). <i>Microbiology</i>, 5th</p>

Unit 4: Fungi Diagnostic features of identification; morphology, reproduction and classification with special reference to <i>Rhizopus</i> , <i>Penicillium</i> and <i>Agaricus</i> ; Lichens (a general account).			edition. New Delhi, Delhi: Tata McGraw-Hill Co.  6. Tortora, G.J., Funke, B.R., Case. C.L. (2007). Microbiology. San Francisco, U.S.A: Pearson Benjamin Cummings.
Unit 5: Bryophytes, Pteridophytes and Gymnosperm Characteristic features of identification, Morphology and reproduction of Bryophytes. Pteridophytes and Gymnosperms, with special reference to <i>Marchantia</i> , <i>Funaria</i> , <i>Pteris</i> and <i>Pinus</i> (only morphology).	February, 2023	Revision and test	7. Raven, P.H., Evert, R.F., Eichhorn, S.E. (1999). Biology of Plants. New York, NY: W.H.Freeman and Company Worth Publishers.  8. Sethi, I.K. and Walia, S.K. (2018). Text book of Fungi and Their Allies. (2nd Edition), Medtech Publishers, Delhi.  9. Vashishta, P.C., Sinha, A.K., Kumar, A. (2010). Pteridophyta. New Delhi, Delhi: S. Chand & Co Ltd.