**Swami Shraddhanand College**
**(University of Delhi)**
Alipur, Delhi- 1100036
www.ss.du.ac.in

# Lesson Plan

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| **Name of Teacher** | **Madhulika Singh (2 class/week)** | **Department** | **Botany** |
| **Course** | **B.Sc. (H) Boatny** | **Semester** | **I** |
| **Paper** | **Cell Biology-Organelles and Biomolecules** | **Academic Year** | **2023-2024** |

**Learning Objectives**

The Learning Objectives of this course are as follows:

- Cell as a structural and functional unit of life.
- Types of biomolecules (proteins, carbohydrates, lipids and nucleic acids) and their rolesin cell structure and function.
- Structures of different organelles and their role in fundamental metabolic processes of acell.

**Learning Outcomes**

The Learning Outcomes of this course are as follows:

By studying this course students will gain basic knowledge on

- The relationships between the properties of macromolecules, their cellularactivities andbiological functions.
- Physico-chemical composition of organelles and their functional organization.
- Basic principles and concepts of evolution that contribute to plant diversity.

**Lesson Plan**

| *Week No.* | Theme/ Curriculum |
|---|---|
| 1. Week 1 ($21^{st}$ -$27^{th}$ Aug 23) | |
| 2. Week 2 ($28^{th}$ -$3^{rd}$ Sept 23) | |
| 3. Week 3 ($4^{th}$-$10^{th}$ Sept 23) | |
| 4 Week 4 ($11^{th}$ -$17^{th}$ Sept 23) | |
| 5 Week 5 ($18^{th}$-$24^{th}$ Sept 23) | |
| 6 Week 6 ($25^{th}$-$1^{th}$ Oct 23) | |
| 7 Week 7 | |

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| (2nd-8th oct 23) | |
| 8 Week 8<br>(9th-15th oct 23) | |
| 9 Week 9<br>(16th-22th Oct 23) | |
| 10 Week 10<br>(23th -29th Oct 23) | |
| 11 Week 11<br>(30th-5th Nov 23) | |
| 12 Week 12<br>(6th-12th Nov 23) | |
| 13 Week 13<br>(13th-19th Nov 23) | |
| 14 Week 14<br>(20th-26th Nov 23) | |
| 15 Week 15<br>(27th-3rd Dec 23) | |
| 16 Week 16<br>(4th -6th Dec 23) | |
| **Suggested Readings** | |
| Books | **Essential/recommended Readings:**<br>• Hardin, J. and Lodolce, J.P. (2022). Becker's World of the cell, 10th edition, Pearson |

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<ul>
<li>Berg, J.M., Tymoczko, J.L., Stryer, L. (2011). Biochemistry. New York, NY: W. H. Freeman and Company.</li>
<li>Campbell, N. A. (2020). Biology: A Global Approach, 12th Edition, Pearson</li>
<li>Campbell, P.N., Smith, A.D. (2011). Biochemistry Illustrated, 4th edition.London, UK: Churchill Livingstone.</li>
</ul>
Suggested readings:
<ol>
<li>Cooper, G.M., Hausman, R.E. (2019). The Cell: A Molecular Approach, 7thedition. Sinauer/OUP.</li>
<li>Iwasa, J, Marshall , W. (2020). Karps's Cell Biology, 9th edition, New Jersey,U.S.A.: John Wiley & Sons.</li>
<li>Majumdar, R., Sisodia, R. (2019). Laboratory Manual of Cell Biology, withreference to Plant Cells. New Delhi, Delhi: Prestige Publication.</li>
<li>Nelson, D.L., Cox, M.M. (2021). Lehninger Principles of Biochemistry, 8thedition. New York, NY: W.H. Freeman and Company.</li>
<li>Reven, F.H., Evert, R.F., Eichhorn, S.E. (1992). Biology of Plants. New York,NY: W.H.Freeman and Company.</li>
<li>Tymoczko, J.L., Berg, J.M., Stryer, L. (2012). Biochemistry: A short course, 2ndedition. New York, NY: W.H.Freeman and Company.</li>
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Assignment and Class Test Schedule for Semester<br><br>
Assignments: Submission by 30th October 2023<br><br>
Class Test: 21.11.2023
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