

**FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28)**  
**DEPARTMENT OF BOTANY**  
**COURSE CURRICULUM**

<b>PART- A: Introduction</b>			
Program: Bachelor in Life Sciences (Diploma / Degree/ Honors)		Semester - IV	Session: 2024-2025
1	Course Code	BOSC-04	
2	Course Title	Lab. Course – 04 (Angiosperms)	
3	Course Type	Laboratory Course	
4	Pre-requisite (if, any)	As per program	
5	Course Learning Outcomes (CLO)	At the end of this course, students will be able to: > Understand the systematic status of flowering plants. > Learn collection of local flora , identification and herbarium preparation. > Understand internal structure of different plant parts. > Understand the pollination and seed dispersal mechanism. > Understand about reproduction system in flowering plants.	
6	Credit Value	1 Credits	Credit =30 Hours Laboratory or Field learning/Training
7	Total Marks	Max. Marks: 50	Min Passing Marks: 20

<b>PART -B: Content of the Course</b>			
Total No. of learning-Training/performance Periods: 30 Periods (30 Hours)			
Module	Topics (Course contents)		No. of Period
Lab./Field Training/ Experiment Contents of Course	<ul style="list-style-type: none"> <li>• Description of local plants of the syllabus in semitechnical language, floral formula and floral diagrams should be drawn.</li> <li>• Prepration of herbarium of local flora.</li> <li>• Anatomy of primary and secondary growth in monocuts and dicots stem using hand sections or permanent slides.</li> <li>• Anatomy of root, primary and secondary structure.</li> <li>• Study of placentation.</li> <li>• Study of types of ovule in permanent slide.</li> <li>• Isolation of globular, heart shape and torpedo embryo.</li> <li>• Study of pollination by insects.</li> </ul>		30
Keywords	Herbarium, Monocot, Placentation, Pollination		

**Signature of Convener & Members (CBoS) :**

- ① *R. Sivar*
- ② *Seundes*
- ③ *Madhu*
- ④ *M*
- ⑤ *Agarwal*
- ⑥ *CL*
- ⑦ *h*
- ⑧ *bnig*
- ⑨ *Blaut*
- ⑩ *M. G.*

## PART-C: Learning Resources

### Text Books, Reference Books and Others

#### Text Books Recommended –

1. Pandey, B.P. (2014). Modern Practical Botany Vol. II. S. Chand and Company Ltd., NewDelhi.
2. Bendre, A.M. and Kumar A. (2003). Manual of Practical Botany Vol. II. RastogiPublications, Meerut.
3. Santra S.C. and Chatterjee (2005). College Botany Practical Vol. II New Central Book Agency Pvt. Ltd

#### Online Resources–

- e-Resources / e-books and e-learning portals
- [www.swayam.ac.in](http://www.swayam.ac.in)
- [www.ignou.ac.in](http://www.ignou.ac.in)
- [www.egyankosh.ac.in](http://www.egyankosh.ac.in)
- [www.iitm.ac.in](http://www.iitm.ac.in)
- [www.eskillindia.org](http://www.eskillindia.org)
- [www.eshiksha.mp.gov.in](http://www.eshiksha.mp.gov.in)
- [www.vlab.co.in](http://www.vlab.co.in)
- [www.internshala.com](http://www.internshala.com)
- [www.ndl.iitkgp.ac.in](http://www.ndl.iitkgp.ac.in)

#### Online Resources–

- e-Resources / e-books and e-learning portals

<https://visiblebody.com/learn/biology/monocot-dicot/roots>

<https://www.toppr.com/guides/biology/differences-between/monocot-and-dicot-stem/>

<https://examupdates.in/plant-anatomy-and-embryology-book/>

[https://jrs.ac.in/working\\_folder/DOWNLOAD-D-12-180-618C09F700115.pdf](https://jrs.ac.in/working_folder/DOWNLOAD-D-12-180-618C09F700115.pdf)

## PART -D: Assessment and Evaluation

### Suggested Continuous Evaluation Methods:

Maximum Marks: 50 Marks

Continuous Internal Assessment (CIA): 15 Marks

End Semester Exam (ESE): 35 Marks

Continuous Internal Assessment (CIA):15 (By Course Teacher)	Internal Test / Quiz-(2): 10 & 10	Better marks out of the two Test / Quiz + obtained marks in Assignment shall be considered against 15 Marks
	Assignment/Seminar +Attendance - 05 Total Marks - 15	
End Semester Exam (ESE): 35	Laboratory / Field Skill Performance: On spot Assessment	Managed by Course teacher as per lab. status
	A. Performed the Task based on lab. work - 20 Marks	
	B. Spotting based on tools & technology (written) – 10 Marks	
	C. Viva-voce (based on principle/technology) - 05 Marks	

Name and Signature of Convener & Members of CBoS:

- ① Rishu
- ② Anurag
- ③ Anshu
- ④ M. Anshu
- ⑤ Anshu
- ⑥ Anshu
- ⑦ Anshu
- ⑧ Anshu
- ⑨ Anshu
- ⑩ Anshu