DEPARTMENT OF BOTANY UNDERGRADUATE COURSE CURRICULUM 2023-24

P	ART-A: Introdu	ction			Session: 2023-2024
	ogram: <i>Diploma Co</i>		ss: B. Sc. Semester-IV	Year: 2023	Session. 2023-2024
1 Course Code BSC		BSC - 4T	- 4T		
2	Course Title	Plant Taxonomy, Anatomy & Embryology			
3	Course Type	Discipline Specific Course (DSC)			
4	Pre-requisite(if.any)	As per Government norms / Institutional scheme			
5	Course Learning. Outcomes (CLO)	After completion of this course, the students will be able to - > - understand the concept, diversity and evolution of Angiosperm plants > - learn basics of plant systematic and status of flora > identification and preservation and herbarium preparation of flora > - become familiar with the internal structure of plant and concept of plant tissues with its evolutionary concept > Understand the reproductive mystery of plats and its importance			
6	CreditValue	03 (Credit = 15 Hours Teaching-learning)			
7	Total Marks	Max. Mar	ks: 100	Min Pas	sing Marks: 40

AKI	B: Content of the Course Total No. of Teaching-learning - Hours-45	
Topics (Course contents)		
Unit	Topics (Course content)	
1	Plant taxonomy: Classification, Nomenclature. Functions of Herbarium, important herbaria and botanical gardens of the world and India. Principles and rules (ICN): Types of classification-artificial, natural and phylogenetic. Bentham & Hooker (upto series), Engler & Prantl (upto series) and Hutchinson system of classification with its merits and demerits. Modern trends of taxonomy and Numerical taxonomy.	12Hours
п	Taxonomic Description: Characteristics, systematics and economic importance of Dicotyledonous family- Brassicaceae, Malvaceae, Fabaceae (subfamily), Apiaceae, Rutaceae, Euphorbiaceae, Lamiaceae, Astraceae. And Monocotyledonous family – Orchidaceae, Lilliaceae, Cyperaceae and Poaceae. [Floral features, Floral formula	11Hours
111	Anatomy: Tissue system – features and function of different types of Menstelland and Permanent tissues. Internal Structure of dicot and monocot root stem and leaf. Root and shoot apex organization; Secondary meristem and Secondary growth in root and stem. Wood (heartwood and sapwood). Abnormal Secondary Growth (Acharothus Nystanthus Boerhayia, Dracaena).	11Hours
ıv	Embryology: Structure of anther and pollen; Structure and types of ovules; Embryo saes -types & typial, Pollination and Fertilization, Double fertilization; Endosperm types, structure and functions Development of embryo -Dicot and monocot embryo; Cocept of Apomixes and Polyembryony. Seed - structure appendages and dispersal mechanisms.	liHours

4 All

1 Signature of Convener & Members of BOS:

Dans

PART-C (BSC - 4T)

Learning Resources: Text Books, Reference Books and Others

Text Books Recommended

- Simpson, M.G. (2006). Plant Systematics. Elsevier Academic Press, San Diego, CA, U.S.A.
- 2. Singh, G. (2012). Plant Systematics: Theory and Practice. Oxford & IBH Pvt. Ltd., New Delhi.
- 3. Plant taxonomy by V. K. Jain
- 4. Bhojwani, S.S. &Bhatnagar, S.P. (2011). Embryology of Angiosperms. Vikas Publication House Pvt. Ltd. New Delhi. 5th edition.
- Mauseth, J.D. (1988). Plant Anatomy. The Benjamin/Cummings Publisher, USA.
- 6. Pandey, B. P. (LatesEdt.). Plant Anatomy

Online Resources-

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

- https://www.amazon.in/Plant-Taxonomy-past-present-future-ebook/dp/B01602IQI4
- https://books.google.co.in/books/about/PLANT_TAXONOMY_2E.html?id=Roi0lwSXFnUC&re dir esc=v
- https://www.kobo.com/ww/en/ebook/a-textbook-of-plant-taxonomy
- https://examupdates.in/plant-anatomy-and-embryology-book/

Use of following sites

- https://uou.ac.in/sites/default/files/slm/BSCBO-201.pdf
- https://www.perlego.com/book/1975516/plant-taxonomy-and-biosystematics-classical-andmodern-methods-pdf
- https://www.scribd.com/document/583581867/Plant-Systematics-By-Op-Sharma-Chapter-02
- https://www.uou.ac.in/sites/default/files/slm/BSCBO-202.pdf
- https://egyankosh.ac.in/bitstream/123456789/69535/1/Block-4.pdf

Suggested Continuous Ev	aluation Methods:		The state of the s
Maximum Marks:		100 Marks	
Continuous Comprehens	ive Evaluation (CCE):	20 Marks	
Semester End Exam (SEE):		80 Marks	
Internal Assessment:		10 Marks each The best o	btained marks of both test

Internal Assessment: Continuous Comprehensive Evaluation (CCE)		exam and marks of Assignment shall be considered against 20 Marks	
Semester End	Paper - Two section - A & B		

Section A: Objective and Short answer type questions - 10 + 30 = 40 Marks Objective-10 x 1=10; Short Answer Type Questions- 10 x 3=30

Section B: Descriptive answer type questions unit wise - $4 \times 10 = 40 \text{ Marks}$

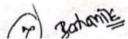
ame and Signature of Convener & Members of BOS:

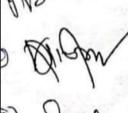
Part - D: Assessment and Evaluation











Exam (SEE):