

Programme: M. Sc. (Botany)

Course Code: BOC-126

Title of the Course: Lab in Systematics of Angiosperms

Number of Credits: 1

Effective from AY: 2020-21

<u>Prerequisite s for the course:</u>	Should have studied or have the practical knowledge of Plant morphological terms.	
<u>Objective:</u>	To learn plant taxonomy through dissection of flowers, use of Floras and field study and develop skills to handle plant identification and floristic work independently and at the same time able to handle molecular data for interpreting phylogeny.	
<u>Content:</u>	<ol style="list-style-type: none">1. Writing of technical descriptions.2. Construction of keys.3. Identification of local species using Floras, keys and campus field trips.4. Identification of 25 families using diagnostic characters; diagnostic characters to be illustrated.5. Construction of phylogentic tree based on gene sequences available at NCBI database (each student may be given different gene sequences/taxa).	2 hours 2 hours 4 hours 12 hours 4 hours
<u>Pedagogy:</u>	Through actual dissection of floral parts/ Field trip /Practice	
<u>References/ Readings</u>	<ol style="list-style-type: none">1) Barry G. Hall. 2007. Phylogenetic Trees Made Easy: A How-To Manual, Third Edition. Sinauer Associates, Inc., Publishers, Sunderland, USA.2) Jain, S.K. and R.R. Rao. 1977. A handbook of Field and Herbarium methods. Today and Tomorrow Printers and Publishers, New Delhi.3) Lawrence, G.H.M. 1951. Taxonomy of Vascular. Plants. Oxford & IBH Publishing Co.4) Singh, G. 2009. Plant systematics: an integrated approach. Science Pub Inc.5) Utteridge, T. and G. Bramley. 2014. Tropical Plant Families Identification Handbook. Kew Publishing.6) Walter S. Judd, Christopher S. Campbell, Elizabeth A. Kellogg, Peter F. Stevens and Michael J. Donoghue. 2007. Plant Systematics: A Phylogenetic Approach, Third Edition. Sinauer Associates, Inc., Publishers, Sunderland, USA.	

<u>Learning Outcomes</u>	<ol style="list-style-type: none"> 1. Able to write technical description of plants and construct and use keys for identification. 2. Able to identify common plant families based on the morphological features. 3. Able to recognise common plants. 4. Able to construct phylogenetic tree based on molecular sequences. 	
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