



**University of Management & Technology**  
**School of Science & Technology**  
**Department of Life Sciences**

**BO112/BO111: Biodiversity of Plants / Botany II**

<b>Lecture Schedule</b>	Wednesday and Thursday 9:30-10:45	<b>Semester</b>	Spring 2021
<b>Pre-requisite</b>	--	<b>Credit Hours</b>	3+1
<b>Instructor(s)</b>	Muhammad Irfan Fareed	<b>Contact</b>	<a href="mailto:muhammad.fareed@umt.edu.pk">muhammad.fareed@umt.edu.pk</a>
<b>Office</b>	6 # office	<b>Office Hours</b>	Displayed
<b>Course Description</b>	This course presents an overview of the techniques and underlying theory of the diversity of plants and their structures and significance		
<b>Content</b>	<p>Comparative study of life form, structure, reproduction and economic significance of:</p> <ul style="list-style-type: none"> <li>• Viruses (RNA and DNA types) with special reference to TMV or CLCuV;</li> <li>• Bacteria and Cyanobacteria (Nostoc, Anabaena, Oscillatoria) with specific reference to biofertilizers, pathogenicity and industrial importance;</li> <li>• Algae (Chlamydomonas, Spirogyra, Chara, Vaucheria, Pinnularia, Ectocarpus, Polysiphonia)</li> <li>• Fungi (Mucor, Penicillium, Phyllactinia, Ustilago, Puccinia, Agaricus), their implication on crop production and industrial applications.</li> <li>• Lichens (Physcia)</li> <li>• Bryophytes i. Riccia ii. Anthoceros iii. Funaria</li> <li>• Pteridophytes. i. Fossils and fossilization ii. Psilopsida (Psilotum) iii. Lycopsida (Selaginella) iv. Sphenopsida (Equisetum) v. Pteropsida (Marsilea) vi. Seed Habit</li> <li>• Gymnosperms i. Cycas ii. Pinus iii. Ephedra</li> </ul>		

<b>Text book &amp; Reference book(s)</b>	<ul style="list-style-type: none"> <li>• Prescott, L.M., Harley, J.P. and Klein, A.D. 2004. Microbiology, 3rd ed. WM. C. Brown Publishers.</li> <li>• Alexopoulos, C.J., Mims, C.W. and Blackwell, M. (1996).Introductory Mycology.(4th Ed.) John Wiley and Sons, UK</li> <li>• Hussain, F. 2012. A Text Book of Botany and Biodiversity. Pak Book Empire</li> </ul>								
<b>Grading Policy</b>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Assignments + Quizzes:</td> <td style="text-align: right;">20%</td> </tr> <tr> <td>Midterm:</td> <td style="text-align: right;">25%</td> </tr> <tr> <td>Lab:</td> <td style="text-align: right;">20%</td> </tr> <tr> <td>Final:</td> <td style="text-align: right;">35%</td> </tr> </table>	Assignments + Quizzes:	20%	Midterm:	25%	Lab:	20%	Final:	35%
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