

**GC. 122 Botany**

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**Botany**

**Cr. Hrs 03**

**BS Geography 4 Years Programme, University of the Punjab, Lahore**

**Specific objectives of course:**

To familiarize the students with the diversity of nature. Importance of biodiversity for survival and proper functioning of ecosystems.

**Course Outline:**

**1. Biodiversity :**

Definition, types and threats

**2. Threats to Biodiversity; Deforestation, over grazing, erosion, desertification, ecosystem degradation, Environmental pollution and climate change**

**3. Biodiversity of Pakistan**

#### 4. Ecological services,

Definition of ecological services. The types of ecological services and significance

#### 5. Sustainable and unsustainable use of biological resources

#### 6. International treaties/agreements regarding Biodiversity and conservation;

CBD, CITES, Ramsar

#### 7. Conservation vs preservation

#### 8. Environmental Impact Assessment (EIA).

Basic concepts and Steps

#### **Recommended Books:**

1. Abbasi, A. M., Khan, M. A., M. Ahmad and M. Zafar. 2012. Medicinal plant biodiversity of Lesser Himalaya Pakistan. Springer Publishers USA.
2. Hussain, F., 1991. Vegetation and ecology of lesser Himalaya. Department of Botany, Peshawar
3. Shinwari, M. I. and M. A. Khan. 1998. Ethnobotany of Margalla Hills. Department of Biological Sciences, Quaid-i-Azam University Islamabad Pakistan.
4. Shinwari, M. I., M. I. Shinwari and Shah, M. 2007. Medicinal Plants of Margalla Hills National Park Islamabad. Higher Education Commission Islamabad. Pp.218.
5. Provincial conservation strategies
6. Heywood, V. (ed.). 1995. Global Biodiversity Assessment. Published for the United Nations Environment Programme. Cambridge University Press, Cambridge, UK.
7. Falk, D. A. & Holsinger, K. E. 1991. Genetics and Conservation of Rare Plants. Center for Plant Conservation. Oxford University Press, Oxford, UK.
8. Frankel, O. H., Brown, A. H. D. & Burdon, J. J. 1995. The Conservation of Plant Biodiversity. Cambridge University Press, Cambridge, UK.
9. IUCN. 1994. IUCN Red List Categories. As Approved by the IUCN Council. IUCN.
10. Leadlay, E. and Jury, S. 2006 Taxonomy and Plant Conservation. CUP.
11. Bush, M. B. 1997 Ecology of a changing Planet. Prentice hall. New Jersey.
12. French, H. 2000 Vanishing Borders- protecting the Planet in the age of globalization. W. W. Norton & Co.
13. Swanson, T. 2005 Global Action for Biodiversity. Earth Scan Publication Ltd.
14. Taylor, P. 2005 Beyond Conservation. Earth Scan Publication Ltd.