MANGALORE UNIVERSITY

Department of Biosciences
MSc Environmental Science

ESH551 **CONSERVATION OF BIODIVERSITY** **52 hrs.**

Course Outcomes:

CO1 Explain the concept of biodiversity and its conservation.

CO2 Describe the policies that have been developed to conserve biodiversity.

CO3 Get the knowledge of biodiversity and causes for biodiversity depletion.

CO4 Understand different Acts for biodiversity conservation.

UNIT I (13 Hours)

Biodiversity – Definition, types - Genetic, Species, Ecosystem diversity; Alpha, Beta and Gamma diversity, values of Biodiversity – consumptive use value, optional values, productive use value, social value. Biowealth, endemism, significance of the endemism, hotspots of Biodiversity.

UNIT II (13 Hours)

Endangered flora and fauna of India. Red data book and IUCN categories. Endangered, Vulnerable and Rare species. Man - Wildlife conflicts. Ecological consequences of reduction in biodiversity. Biodiversity issues – Deforestation and its impact. Two paradigms of Biodiversity, Convention on Biological diversity (CBD), Man and Biosphere programme (MAB).

UNIT III (13 Hours)

Causes for depletion of biodiversity in India, Biodiversity in Karnataka. Conservation measures of biodiversity in Karnataka, Sacred grooves. Prospects and Perspectives of keystone species with special reference to Tiger.

UNIT IV (13 Hours)

Concept of conservation – objectives and management. Biosphere Reserves. Nilgiri Biosphere Reserve - Biosphere Reserves in India, *In situ* and *ex situ* conservation, Role of Zoos, National Parks and Sanctuaries in conservation, Biological Diversity Act of India.

References:

1. Agarwal, S.K. Biodiversity and Environment, APH Publishers, New Delhi (2002)
2. Dadhich, L.K. and Sharma,A.P. Biodiversity – Strategies for Conservation, APH Publishing Corp., New Delhi (2002)
3. Khan, T.I. and Dhari N. Global Biodiversity Conservation Measures, Pointer Publishers, Jaipur(1999)

4. Krishnamurthy. K.V. An Advanced Text book on Biodiversity – Principles and Practice, Oxford and IBH publishing, New Delhi (2003)
5. Nagore, A.P. Biological Diversity and International Environment Law (2000)