

Natural History Museum, Obafemi Awolowo University,

Ile - Ife, Nigeria

MASTERS
PROGRAMME IN
CONSERVATION
SCIENCE (MCS)

Course Content

CORE COURSES

<u>Course Code</u>	<u>Course Title</u>	<u>Units</u>
NHM.630	Collection, acquisition and documentation	3
NHM.631	Management of Biological Gardens and Forest Reserves	3
GPY.606	Advanced Biogeography	3
NHM.632	Geo-environmental studies	3
NHM.640	Research Project	4
NHM.641	Seminar	2
		<u>18</u>

<u>Electives</u>	<u>Course Title</u>	<u>Units</u>
NHM.633	Plant Conservation Techniques	3
NHM.634	Animal Conservation Techniques	3
NHM.635	Floral and Faunal diversity	3
NHM.636	Ethnobiology	3
NHM.637	Conservation of Archaeological and Anthropology materials	3
NHM.6318	Taxidermic Techniques	1

COURSE OUTLINE

GPY.606 **Advanced Biogeography** 2+0+3(3 UNITS)

Basic principles of biogeography. Global climate and the geographic range of living things; biogeography in relation to evolution; biogeographical division of the earth; tropical biogeography. Patterns of biological diversity; the match between organisms and environment. Biological dispersal and invasion; island biogeography. Contemporary analytical biogeographical methods and phylogeny. Biogeography and conservation.

NHM.630 **Collection, acquisition and documentation** 2+0+3(3 units)

general principles of Museum collection, care and maintenance. Acquisition policy; mode of acquisition. Field gathering, purchase, donations, loans, deposits and exchanges. Documentation and retrieval of information. Accessioning objects and specimens. The numbering systems. Registration, cataloguing and classification. The

use of computer in cataloguing. The Museum Library Selection and Acquisition. The importance of Museum collection in conservation.

NHM.631: Management of Biological Gardens and Forest Reserves 2+0+3 (3 Units)

Types of biological gardens. Roles of biological gardens and forest reserves in conservation of plants and animals. The significance of biological gardens and forest reserves in sustainable and management of botanical gardens, zoological gardens, horticultural parks and game reserves. Review of the needs of animals in nature and captivity. Design and construction of breeding cages. Keeping, breeding and culturing of endangered plants and animals species. Control of plants and animal diseases.

NHM.632 Geo-environmental Studies 2+0+3 (3 Units)

planetary resources and their management. Environmental impact of weathering and mass wasting of continental surfaces in landslide, mud-flows and flooding. Aspects of environmental impact assessment in mineral extraction and processing. Prevention and management of oil spillages, landfilled operations. Earthquake prediction. Conservation of surficial and underground water systems. Legislation for environmental protection. Protection of landscape and sea-scape.

NHM.633 Plant Conservation Technique 2+0+3(3 Units)

The need for conservation. Taxonomy of endangered species: causes and consequences of the species loss. Techniques of conserving plant species - biotic and abiotic factors on plant populations. Collection, characterization and evaluation. The reproductive threats to propagation. Strategies of plant conservation - in-situ and ex-situ through seed bank, field gene bank and tissue culture. Re-introducing the endangered spp. Role of technology and Government in conservation.

NHM.634: Animal Conservation Technique 2+0+3(3 Units)

Principles of conservation biology. Taxonomy of endangered animal species. Strategies of animal conservation in-situ and ex-situ through field studies, captive breeding and re-introduction of endangered and threatened species. Application of Remote. Sensing and geographic information systems. Principle of conservation biology - the need for conservation, effects of biotic and abiotic factors on animal populations.

NHM.635: Floral and Faunal Diversity 2+0+3(3 Units)

Concept of diversity; indices of diversity. Distribution patterns of plants and animals in forest and savanna ecosystems. Survey of animals and plants found in such vegetation types. Their habitat adaptation and food relationships. Problems encountered in assessment of abundance of plants and animals. Factors affecting distribution.

NHM.636: Ethnobiology 2+0+3(3 Units)

Resource value of indigenous plants and animals. Management of indigenous natural resources. Development of the conservation policy on endangered plant and animal species.

NHM.637: Conservation of Archaeological and Anthropological Materials
1+0+3(2 Units)

Archaeometry. Preservation of archaeological records. Archaeological preservation field methods. Microenvironmental alterations of archaeological materials and their control. Physical and ecological anthropology. Salvage archaeology. Restoration of archaeological materials. Preservation of organic and non-organic materials.

NHM.638: Taxidermic Techniques 0+0+3(1 Unit)

Tools and materials. Fixing and preserving. Moulding and casting. Skinning and mounting birds. Skinning mammals, tanning skins and mounting mammals. Skinning mammals, mounting fish, casting fish, reptiles and amphibians. Freeze-drying small vertebrates, fungi and flowers; preparation of skeletons.

NHM640: Projects Project in the area of interest. (4
Units)

NHM.641: Seminar Propositional and final (2
Units)