Course Code : SSC 304
Course Title : Introductory Soil Conservation and Watershed Management
Credit Hours : 2(2+0) Full Marks: 50 Theory: 50 Practical: 0

OBJECTIVES

Upon the completion of this course, the students will be able to understand forms of soil erosion and land degradation and the mechanics involved therein to apply control measures for protection and restoration both in general and Nepalese context.

I. SYLLABUS

Introduction: Importance of Soil and Its Conservation, Soil erosion: Causes of Soil Erosion; Mechanics of Soil Erosion by Water; Mechanics of wind erosion; Landslide, Landslip and Mass Wasting; Monitoring and estimation of soil erosion; Soil Erosion Control and Control Measures; Land Use Capability Classification of soil; Soil conservation; Bio-Engineering Techniques; Hydrology; Watershed Management; Present status of Soil Conservation and Watershed Management in Nepal.

III. COURSE OUTLINE

Lectures

S. N.	Topic	No. of Lectures
1.	Introduction: Importance of Soil and Its Conservation	1
2.	Soil erosion: Definition and type of soil erosion, Causes of Soil Erosion	2
3.	Soil Erosion by Water: Mechanics of water Erosion, Water Erosion Types and Factors Affecting, Theory to solve of landslide problem in Nepal.	5
4.	Soil erosion by Wind: Mechanics of wind erosion, Types and Factors affecting Wind Erosion.	3
5.	Soil erosion monitoring and estimation: Simple Visual Methods, Run off plot Technique, Empirical method for soil loss-Universal Soil Loss Equation (USLE)	3
6.	Land Use Capability Classification of soil	2
7.	Soil conservation: Importance of soil conservation, Soil conservation practices on farm land, pasture land, forest land and urban area; Biological and Mechanical methods for Soil Erosion Control; Slope Agriculture Land Technology (SALT)	4
8.	Bio-Engineering Techniques: Introduction and function of Bio engineering measures.Comparison of bio-engineering with conventional approaches	2

9.	Hydrology: Definition, Braches and scope of hydrology, importance of hydrologic knowledge in natural resource planning; Hydrologic cycle, human influence on hydrologic processes	2
10.	Watershed Management: Definition and Concept of Watershed Management, Watershed Management Planning, Integrated Watershed Management, Water Harvesting technique,	4
11.	Present status of Soil Conservation and Watershed Management in Nepal	2
	Total	**30**

REFERENCES

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Tripathi, R. P. and H. P. Singh. 1993. Soil Erosion and Conservation. Wiley Eastern Ltd, New Delhi

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Vegetated and Soil Treatment Measures. FAO Watershed Management Field Manual No. 13/ 1. FAO, Rome