

99-2 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	微生物復育技術	Serial No. / ID	1489 / BTI4012
Dept.	生物產業科技學系	School System / Class	大學日間部3年1班
Lecturer	張育騰	Full or Part-time	兼任
Required / Credit	Optinal / 3	Graduate Class	No
Time / Place	(五)678 / H566	Language	Chinese

Introduction
<p>(1) Rapid development of technology has created the material life of progress, bringing environmental worries. (2) Increasing the environmental quality is low, industrial pollution, waste discharge, waste disposal are all any of the main reasons for environmental degradation. Waste on soil ecology for environmental pollution, the law experts to find solutions, develop various types of chemical, physical and biological methods to remove the environment or reduce the toxicity of harmful factors. (3) Physical methods: is to be spilling waste control, such as changing the temperature of the gasification or by adsorption of volatile pollutants manner to leave the groundwater. (4) Chemical methods: changing waste the molecular structure of harmful chemicals, thus reducing the toxicity or completely decomposed, but may produce more toxic substances, causing secondary pollution. (5) Restoration is one of pollution control technology, the characteristics of both the original land back. (6) Bioremediation is a use of natural microbial decomposition of the role of its degradation or interruption to the formation of harmful substances or toxic products of low toxicity approach. (7) The role of micro-organisms such as humans eat the food to digest organic matter, nutrients and energy. Some micro-organisms harmful to human beings digestible organic matter, such as fossil fuels and organic solvents. (8) The ability of</p>

these microbial decomposition of organic pollutants harmless carbon dioxide and water. Once the complete decomposition of pollutants in most subject to restrictions on food sources, to reduce the number of microbial populations, while the remaining residue of dead organisms and the risk is far lower than the original pollutant pollutants. (9) Introduced the micro-organisms in the contaminated sites regulatory mechanism of biological decomposition, and present the current applications of microorganisms in pollution treatment of technical presentations, and cases of pollution assessment of the implementation of procedures and strategies.

Outline

Chapter I) Ecosystem
1.1 Basic concepts and definitions
1.2 The main components of the ecosystem
1.3 The structure and function of ecosystems
1.4 Ecological groups
1.5 Possible approaches ecosystem
Chapter II) Biosphere
2.1 Earth's energy and climate
2.2 The water cycle
2.3 Geological cycle
2.4 Biogeochemical cycles
2.5 Aquatic Ecosystems
Chapter III) Ecosystem productivity, energy consumption and the basic concepts of population ecology
3.1 Primary productivity
3.2 Secondary Productivity
3.3 Decomposition
3.4 Main statistical parameters of biological population size
3.5 Population structure
3.6 Changes in population size
3.7 The relationship between race and ethnicity
Chapter IV) The biological dynamics of the environment
4.1 Overview
4.2 Libi He rules the concept of limiting factors, biological and geographical distribution, climate
4.3 Temperature effects on biological dynamics
4.4 humidity, water, precipitation, snow, wind and other dynamic relationship with the biological
4.5 The dynamic effects of light on biological
4.6 Environment, some of the biological effects of inorganic substances
4.7 Soil, fire and other environmental factors on the biological effects
4.8 The interaction between environmental and biological
Chapter V) On the biological effects of environmental pollution
5.1 The number of chemical elements, compounds, some of the characteristics of
5.2 Toxic substances, pollutants in the ecosystem cycle and migration
5.3