

SAULT COLLEGE  
of Applied Arts and Technology  
Sault Ste. Marie

BIO 126-3  
FOREST BIOLOGY  
Globe and Mail Series BIO 126-3

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## COURSE OUTLINE

BIOLOGY 126-3

Forest Biology

revised June 1981 G. L. Stone

CALENDAR RESUME

BIO 126 - 2  
FOREST BIOLOGY  
Prerequisite BIO 111 - 2

A study of the science of life essential to a career in resource management; the classification and ecology of living organisms, particularly those algae, higher plants, freshwater and terrestrial animals found in Ontario forest and freshwater ecosystems; plant and animal life cycles and introductory animal anatomy.

BIOLOGY 126-3

Forest Biology

Unit # 1  
(9 hrs)

Classification of mitosis, meiosis

- course introduction, drawings, evaluation
- classification of organisms, binomial nomenclature
- taxonomic hierarchy
- mitotic cell division and importance of mitosis
- meiotic cell division and importance of meiosis

# 2  
(12 hrs)

Origin of life, monerans, autotrophic organisms, structure and life cycles

- scientific theory for the origin of life
- primitive single-celled organisms including bacteria and blue-green algae
- ferns and gymnosperms - life cycle and ecology
- flowering seed plants - life cycle and adaptations

# 3  
(12 hrs)

Decomposers, parasites and other invertebrate heterotrophs

- fungi and protozoans including parasite life cycles
- animal life patterns
- growth and development in the animal kingdom
- flatworms and roundworms - structure, habitat and life cycles
- snails and clams - structure and habitat
- segmented worms - structure and habitat
- spiders and crustaceans - structure and habitat

# 4  
(9 hrs)

Insects and vertebrates

- insect orders, examples, occurrence and importance to man
- aquatic vertebrates - lamprey, cartilaginous fish and bony fish - anatomy and habitat
- amphibians - habitat and examples
- vertebrate circulation
- reptiles, birds and mammals - anatomy, habitat and examples

## BIOLOGY ISE-3

### Forest Biology

Classification of microclimates, weather  
- climate interpretation, dynamics, evolution  
- classification of ecosystems, primary forest formation  
- secondary forest formation  
- ecological cell division and importance of senescent  
- vegetative cell division and importance of senescent

origin of life, mutations, adaptive changes, example and  
life cycles  
- selectionistic forces for the origin of life  
- evolutionary adaptive changes involving species and genes  
- donor side  
- leaves and flowers - life cycle and ecology  
- pollinating seed plants - life cycle and adaptation

decomposers, bacteria and other heterotrophic  
- fungi and prokaryotes functioning besides life cycles  
- stages of life between  
- growth and development in the animal kingdom  
- seeds and young - structure and properties  
- seeds and pollen - structure and properties  
- seeds and chrysophores - structure and properties

life cycles and relationships  
- higher orders, examples, occurrence and importance of man  
- parasitic relationships - symbiosis, classifications of symbiosis  
- mutualism and commensalism - benefit and exchange  
- commensalism and exploitation  
- trophism, plants and animals - structure, benefit and exchange