

A: Division: ACADEMIC DATE: OCTOBER 3, 1994

Department: SOCIAL SCIENCES New Course: _____

Information Form: _____

DATED: FEBRUARY, 1982

Semester/Credits	Subject & Course No.	Descriptive Title
(date & section)	1994-1995	Earth's land surface and its modification by surface processes. Topics include: minerals and rocks, geo-

INTRODUCTION TO EARTH SCIENCES

Geography 120

N: Textbooks and materials to be purchased by students.

Page 2 of 6

(Use alphabetical form)

(2nd Ed.) Toronto, Maxwell Macmillan

Toronto, Maxwell Macmillan

es will be updated periodically.

Form with Entries Under the Following Headings:

Complete

nt

Introduction to Earth Sciences

Physical Geography Within Geography

2. Plate Tectonics and Crustal Deformation

Tectonic Theory

Development

Evidence

Mechanisms and Global Patterns

Boundary Types

Plate Te

- De

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Plate Bo

Plate Boundary, Plate Collision, and the

Mid-Ocean

Atlantic Ocean

Rock-Forming Mineral Families

Diagnostic Properties

Mineral Identification

4. Rocks

Igneous Rocks, Their Characteristics and Rock-Forming Environments

Sedimentary Rocks, Their Characteristics and Rock-Forming Environments

Metamorphic Rocks, Their Characteristics and Rock-Forming Environments

Metamorphic Rocks, Their Characteristics and Rock-Forming Environments

Rock Cycle

and Principles

5. Geologic Time

Divisions of Geologic Time: Periods and Epochs

Criteria for Divisions

Fundamentals of Earth Science

Original Horizontality

Superposition

Original Horizontality, Superposition, and Cross-Cutting Relationships

6. Topographic Maps

Projections

Map Scale

Geographical and Cartesian Coordinate Systems

Indicators

Direction In

Construction of Topographic Profiles

Calculation of Vertical Exaggeration and Gradients

Calculation of Vertical Exaggeration and Gradients

7. Volcanism

Mechanisms and Global Patterns

Extensive Igneous Activity

- Eruption Types

- Vent Types

Resolving Rock Source

and Landforms

Weathering

Carbonation

Hydrolysis

Hydration

- FROST ACTION
- Pressure-Release

Factors Which Affect Rates of Weathering

- Climate
- Surface Area
- Jointing, Bedding, Foliation

Weathering
al Forms

- Spheroidal
- Regolith

Plastics

9. Soils
- Soil Characteri
 - Profiles
 - Horizons
 - Chemistry

Formation Factors
Canadian System of Soil Classification
Geographic Distribution of Canadian Soils

10. Mass Movement
- Categories of Mass Movements
 - Falls
 - Avalanches
 - Slides
 - Flows
 - Creep

Factors Affecting Slope Stability

11. Hydrologic Cycle

Components of the Hydrologic Cycle

12. River Systems
- Drainage basins, networks, watersheds and
 - Stream Orders
 - Channel Patterns
 - Processes

Stream Erosion

Flow Characteristics

Interference on River Systems

Impacts of Human

13. Groundwater Systems

Porosity and Permeability
Springs, Wells, Artesian Water, Caves

Solution Processes
Karst Topography

Interaction With Groundwater Systems

Encroachment

Human Interference
- Pollution
- Saltwater
- Subsidence

14. Aeolian Systems

Deserts and the Reasons for Their Distribution | Geographic Distribution of

METHOD OF INSTRUCTION

This course will employ a number of instructional methods to accomplish its

- Lectures
- Labs
- Field Work
- Summative Presentations
- Slides, Videos
- Small Group Discu

Course Evaluation