

Paleontology

Earth Sciences 203

Section: D100

Term: 2004 Spring

Instructor: R. Dunlop

Discussion Topics: Course Description:

EASC 203 is an introduction to paleontology, tracing the evolution of life based on evidence from the fossil record. The course will concentrate on invertebrate fossil groups and the various morphological criteria necessary for their identification. In addition, the course will consider the principles of preservation, classification and paleoecological interpretation, in relation to the main fossil groups important to geology. Lectures will provide the necessary theoretical framework. Laboratory work will focus on examining fossil collections and analytical techniques.

Course Topics:

Introduction to paleontology, principles of preservation, morphological elements of the main invertebrate fossil groups and their classification (this will comprise the bulk of the course).

A brief summary of the early Earth and the origin of life, evolution of eukaryotes, origin of metazoans, significance of the Burgess shale.

The early vertebrates, leaving the water, amphibians and reptiles, the dinosaurs, the evolution of flight, Cenozoic vertebrates.

Use of paleontological data, adaptation and functional morphology, biostratigraphy, paleoecology, biogeography.

Analysis of organisms' adaptive abilities to better suit their environment; the influence of plate tectonics and paleoclimates on the evolution of life; mass extinction events.

Course Organization:

Two 1-hour lectures and one 2-hour laboratory class per week.

Grading: Two Laboratory Quizzes (5% each): 10%

Final Laboratory Exam: 10%

Mid-Term Theory Exam: 15%

Final Theory Exam: 30%

Writing assignments: 35%

Required Texts: Clarkson, E.N.K. (latest edition), Invertebrate Palaeontology and Evolution,

Paleontology

Chapman and Hall, New York, 4rd edition.

Recommended Texts:

Materials/Supplies:

Prerequisite/Corequisite: EASC 102 and BISC 100

Notes:

This outline is derived from a course outline repository database that was maintained by SFU Student Services and the University's IT Services Department. The database was retired in 2014 and the data migrated to SFU Archives in 2015.