

## **Midterm Exam Review Topics**

**Exam Date: Friday, Oct. 31, 2008**

### **Key Concepts**

History of Dinosaur studies - Cuvier, Buckland, Mantell, Anning, Owen, Leidy, Cope, Marsh, Osborn, Andrews, Ostrom

Dinosaurs of the Gobi – Flaming Cliffs and Ukhaa Tolgod, major finds, circumstances of preservation – review essay questions

Geologic Time - relative time, absolute (numerical) time, Hadean, Archean, Proterozoic, Phanerozoic Eons; Paleozoic, Mesozoic, Cenozoic Eras; Triassic, Jurassic, Cretaceous Periods

Correlation of geologic systems using fossils- William Smith

Radiometric dating, half life, parent / daughter isotopes, uranium-lead, radiocarbon dating

Sedimentary rocks - detrital (sandstone, shale), carbonate (limestone), evaporite, coal, depositional (sedimentary) environments - fluvial, lacustrine, eolian, deltaic, marine, significance of sedimentary structures (ripple marks, mudcracks, redbeds)

Fossils - fossil preservation, types of dinosaur fossils: body fossils, trace fossils, chemical fossils

Dinosaur Skeletal Anatomy – skull, axial skeleton, appendicular skeleton

Mesozoic Marine Life – oysters, ammonites, rudistid bivalves, ichthyosaurs, plesiosaurs, pliosaurs, mosasaurs

Sources of inference about dinosaur behavior and biology: skeletal anatomy, biomechanical analysis, modern analogs, trace fossils (trackways, coprolites, eggs-nests, bite marks)

Textbook Chapters to Read and Review: 1,3,10,11,12

Labs to review:

Geologic Timescale

Radiometric Dating

Marine Fossils

Dinosaur Anatomy and Fossils