

GEOLOGY 502 -- Geology of North America

Vic Camp (CG-225; 594-7170; vcamp@geology.sdsu.edu; hrs. 11:00-12:00 MWF or by appt.)

Text: An appropriate textbook for this course is not available

SEQUENCE OF TOPICS AND EXAMS

Introduction and Review

 The Early Earth

 The Geologic Time Scale

 Plate Tectonic Review

The Growth of Continents

The Generation and Demise of Supercontinents

Geosynclines

First Mid-term Exam (50 points) – date to be determined by lecture schedule (Sept. 14 ??)

The Great Pleistocene Ice Age

 Alpine Glaciation

 The Spokane Flood Controversy

The Precambrian of North America

The Phanerozoic Depositional Record of North America

 Sequence Stratigraphy

 Cyclomthemes and Gondwana Glaciation

Evolution of the Appalachian Mountain Belt

 Opening and Closing of the Iapetus Ocean

 The Taconic, Acadian, and Alleghanian Orogenies

The Mesozoic Breakup of Pangaea

Evolution of the Atlantic Coastal Plain

The Ouachita Tectonic Belt

Evolution of the Gulf Coastal Plain

Permian Basins of West Texas

Mid-term Exam (100 points) – date to be determined by lecture schedule

Physiography of the Western Cordillera

Generation of the Cratonic Margin of western North America

Rodinia and the SWEAT Hypothesis

Paleozoic Terrane Accretion (Antler and Sonoma Orogenies)

Mesozoic Terrane Accretion (the Stikinia and Wrangellia superterranes)

The Sierra Nevada Volcanic Arc System

The Laramide Orogeny

Basin and Range Extension

Stratigraphy and Structure of the Colorado Plateau

The Sierra Nevada Batholith

Cenozoic Geology of the Sierra Nevada Province

The Cascade Volcanic Arc

The Columbia Plateau and the Snake River Plain

Final Exam (100 points)