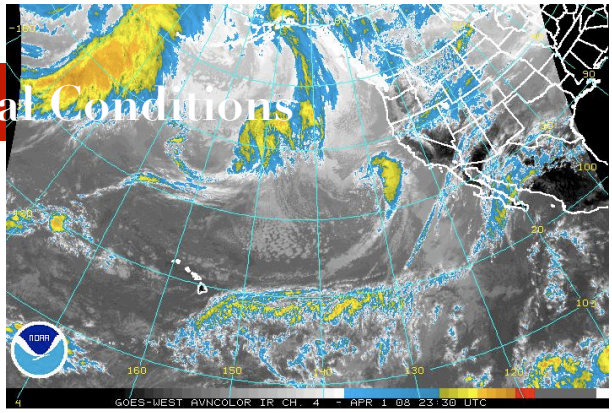
Spring 2010 CE Geography 5 - Environmental Conditions



12 January - 18 May 2010 CE
Reedley College Dinuba Vocational Center
Tuesdays, 1800 - 2050 71055

Course Objectives

Description and interpretation of Earth's physical features. A systematic approach to the solar system, atmosphere, weather, climate, ecosystems and global climate change.

- Understanding interactive elements of weather, climate, soils and vegetation.
- Recognize, understand and apply *geographic terms* and *principles*.
- Develop and apply analytical skills to solve geographic problems.
- Understand and apply scientific and critical thinking logically and systematically

Scott M. Kruse, MA

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Tel. 559.897.6023 (W) 559.355.2018 (cell) s_kruse@me.com

Texts and Materials

- Christopherson, R.W. (2009). ***Geosystems*** 7th Edit. Upper Saddle River NJ: Pearson Prentice Hall **Bring books to class!**
- Christopherson, R.W., Thomsen, C.E. (2007). ***Student Study Guide, Elemental Geosystems***, 5th Edit. Upper Saddle River NJ: Pearson Prentice Hall. - optional
- ***Goode's World Atlas***
- www.prenhall.com/christopherson - student learning center
- Instructor-supplied materials and handouts
- Colored pencils
- Geography Glossary: www.physicalgeography.net/physgeoglos/c.html

Grading A 90-100% B 80-89% C 65-79% D None F 0-64%

Disabled Students

Academic accommodations or materials per the *Americans With Disabilities Act* or ∫*504* of the *Rehabilitation Act* will be made. Please advise me.

Participation, Attendance and Professional Conduct

Punctuality, professional demeanor, courtesy and respect are the norm. All work must be original. Cite sources following American Psychological Association or Council of Biology Editors *Style Manuals*. Turn off cellular phones. Use a respectful language register and dress appropriate to a serious academic setting. No food, drinks, gum or cosmetics in classroom. Use *Cornell notes* to organize text, lecture and video material. *Cornell notes* required for each test. Formal work must be word processed. Refer to *The Mac* or *PC Is Not A Typewriter*. The

International System of Units (SI) per the *Omnibus Trade and Competitiveness Act of 1988* used exclusively. Attendance must be consistent.

Spring 2010 CE Geography 5

Week 1 (12 January) – **Introduction** Globe, Latitude-Longitude-Elevation, Map Projections, Time Zones, Appendix A – maps, B – Soil taxonomy, C – Köppen Climate System, D – SI System

Week 2 (19 January) - Cornell notes, Introduction lab packet No. 1 completion
Chapter 1 – Foundations of Geography (pp. 1-35) **Study Guide No. 1** (SG p. 11-22) Geography, Earth Systems, Time, Maps, Scales & Projections, Remote Sensing & GIS
Chapter 2 – Solar Energy, Seaons and the Atmosphere (pp.36-73); **Study Guide No. 2** (SG pp. 23-37) solar system, sun & earth,Seasons, Atmosphere composition, temperature and function

Week 3 (26 January) - **Chapter 3 Atmosphere, Energy and Global Temperatures** (pp. 75-109) **Study Guide No. 3** (SG p. 39-52) - Energy & surface, temperature concepts, earth's temperature patterns, urban environments

Week 4 (2 February) - **Test No. 1, Chapters 1, 2 & 3 -** requires Cornell notes
Chapter 4 Atmospheric and Oceanic Circulation (pp. 111-139) **Study Guide No. 4** (SG p. 53-66)
- Wind, Forces within Atmosphere, Patterns of Motion, Oceanic Currents, Air Pressure, Macro & microscale winds; Global Circulation, ITCZ, monsoons, jet streams and prevailing winds, Ocean currents

Week 5 (9 February) –**Chapter 5 - Atmospheric Water and Weather** (pp. 140-189) **Study Guide No. 5** (p. 67-83) Water, Humidity, Atmospheric Stability, Clouds and Fog, Air Masses, Lifting Mechanisms, Cyclonic Systems, Violent Weather, Condensation nuclei, Bergeron Process, Collision - Coalescence, Aerosols, Triple Point of H_2O, Snow, Rain, Sleet, Rime, Hail, Instruments, Fog; Snow physics and avalanches

Week 6 (16 February) **Chapter 5 continued.** Hail, lightning, thunder, Mesocyclones, Tornadoes, Dopplar Radar

Week 7 (23 February) - **- Chapter 6**, **Water Resources** (pp. 191-215) **Study Guide No. 6** (p. 85-95) Hydrologic Cycle, Soil Water Budgets, Groundwater, Water Supply. *Groundwater video.*

Week 8 (2 March)- **Test No. 2 - Chapters 4, 5, 6, handouts and notes** - requires Cornell notes **Chapter 7 – Global Climate Systems** (pp. 217-259) **Study Guide No. 7** (p. 97-110) Köppen & Thornthwaite Climate Classification Systems; Global Climate Change, ***Global Climate Systems* Packet**; Cllimatic Water Budget Analysis**.** Local climate data and analysis

Week 9 (9 March) – **Chapter 8 – The Dynamic Planet** (pp. 263-291) **Study Guide No. 8** (p. 111-121). Earth's Structure, Geologic Cycle, Plate Tectonics. *Plate Tectonics video*

Week 10 (16 March) – **Chapter 9 Tectonics, Earthquakes, Volcanoes** (pp. 292-331). **Study Guide No. 9** (p. 123-132). Surface, Crust, Folding & Faulting, Orogenesis, Seismic activity, volcanism

Week 11 (23 March) – **Chapter 10 Weathering, Karst, Mass Movement** (pp. 332-359). **Study Guide No. 10** (p. 133-142) – Landmass Denudation, Weathering processes, Karst topography, Mass Movement **Vernal Equinox**

Week 12 (28 March - 3 April) - Spring Break, No class

Week 13 (6 April) - **Test - Chapters 7, 8, 9, handouts and notes** Cornell notes required. **Chapter 11, River Systems and Landforms** (pp. 360-393). **Study Guide No. 11** (p. 143-154). Fluvial Processes and Landscapes, Drainage systems, Streamflow, Erosion, Stream Terraces, Floods and River Management

Week 14 (6 April) – **Test No. 3 – Chapters 7, 8 and 9, handouts and notes** Cornell notes required **Chapter 12 Wind Processes and Desert Landscapes** (pp. 394-419) **Study Guide 12** (p. 155-162) Eolian processes, erosion, deflation, landforms; sand dunes, loess deposits

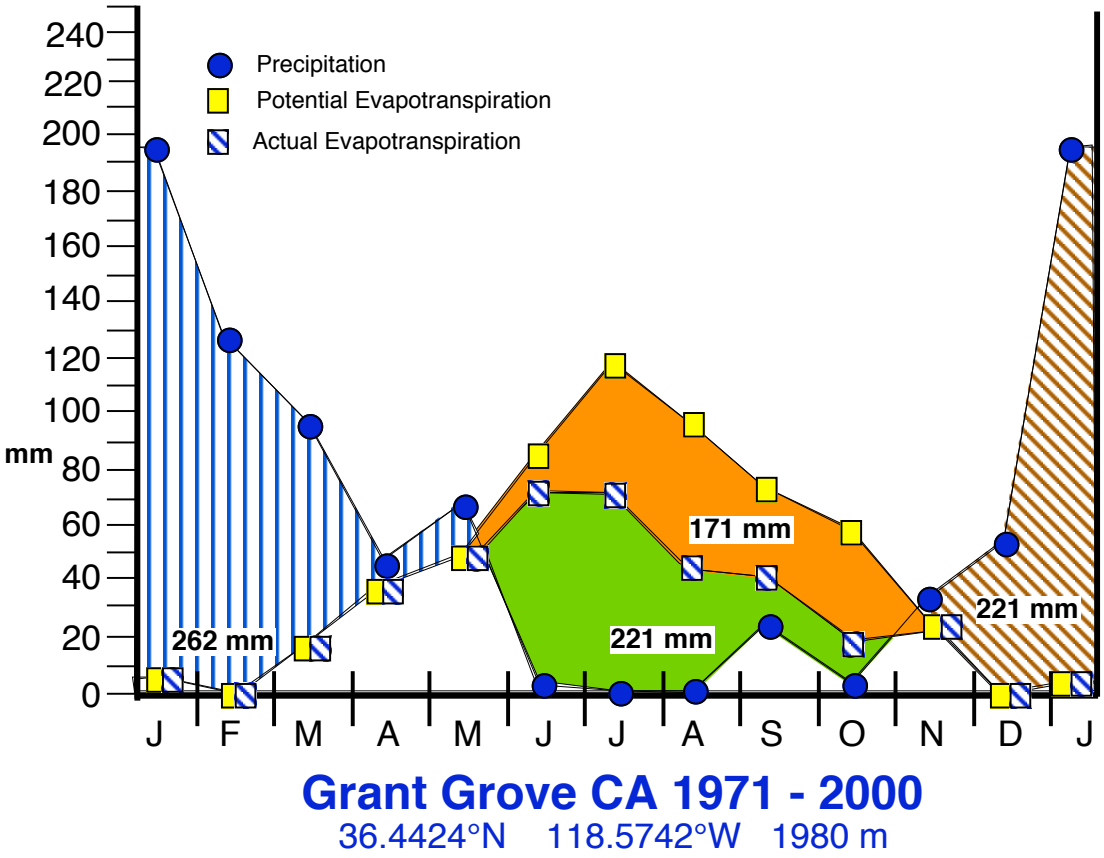
Week 15 (13 April) **Chapter 13 Oceans, Coastal Processes and Landforms** (pp. 420-449). **Study Guide 13** (p. 163-175). Seawater, wave motion, barrier islands

Week 16 (20 April) – **Chapter 16 Ecosystems and Biomes** (pp. 514-561) Ecology, Biogeography, Succession, Ecotones, 10 major terrestrial biomes, **Optical Phenomena**, **Global Climate Problem + data** Global Climate Problem Presentations

Week 17 (27 April) – **Chapter 17 Earth and the Human Denominator** (pp. 562-575), Global and regional climate change, implications for western North America**. Test No. 4 Global Climate Problem Presentations** (Semester Problem), Atmosphere Optics, Aurora, Reflection, Refraction, Mirages, Rainbows, Parahelia, Ongoing review of all course content

Week 18 (4 May) - Global Climate Problem Presentations
Final examination review Optional field trip

Final (11 May) **Final examination** - comprehensive with emphasis on Chapters 1-9, 12, 16-17, notes and handouts



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