Geology 208 Final (30 pts)
Due: Thursday, August 10th, by 11:30 PM
(Late exams (even by 15 minutes) will receive reduced credit.)

Directions: You may use any printed or on-line resources to complete the test, however, **you must complete the test on your own**, without consulting anyone else. (You may talk to me if you have any questions or need clarification.) You may find helpful references in the BCC library.

Answer should be typed and checked for spelling and grammar. (Any diagrams/sketches may be hand drawn.) Each answer should be no more than 1 page of text. (You may want to include sketches – cross-sections, rough geologic maps, stratigraphic sections, etc. – to help illustrate your answer. Sketches do not count towards the page limit. Sketches should be your own work – not photocopies.) **Be sure to give thorough answers and to back up any interpretations with geologic evidence.** Good luck and e-mail me if you have any questions (rviens@bcc.ctc.edu). Read the questions carefully and be sure to answer all the parts!

1. For the past week we have been discussing the Cenozoic volcanic history of the Northwest. Choose 5 of the 6 volcanic episodes listed below and tell me when it occurred, what types of rocks it contains, and give me a brief description of its geologic origins. In addition, on the map provided (or one that you want to sketch yourself) show the location of the 5 volcanic regions that you choose. (If you answer all six, I will only grade the first five.) Answer each as a separate paragraph. Choose from:
   • Challis Arc
   • High Cascade Arc
   • Columbia River Plateau
   • West Cascade Arc
   • Crescent Formation
   • Snake River Plain/Yellowstone Volcano

2. Over the course of the quarter we have learned that all rocks tell a geologic story. Below is a list of some common rocks from the Pacific Northwest. Choose 5 of the 7 rocks listed below. For each rock you chose, briefly describe its physical characteristics, write a short interpretation of its history (i.e., what does it tell us about the geologic history of the area in which it was found?), and give me one example of a place in the Northwest were it could be found. Be as complete as possible for full credit. (Note: you can simply list your answers to this question - they do not have to be in full sentences.) (BONUS: Answer all 7 for extra credit!) (15 pts)
   • Andesite
   • Basalt
   • Arkose sandstone
   • Gneiss
   • Granodiorite
   • Chert with Tethyan fossils
   • Sandstone with crossbeds