You and a partner will be assigned a city: you will study its present climate and figure out the potential effects of climate change. You will analyze the current climate and the effects of the global mean temperature warming 5°C within one hundred years.

First, analyze the current climate of the city. This is determined by factors such as latitude, altitude, the adjacency of mountains or large water bodies (geography), the prevailing winds, etc. Understanding the current climate will require you to apply the concepts we've studied in global climate and to do research in the library and on the internet to determine any local factors that may not be obvious from our general theories. You and your partner will create a PowerPoint presentation on the current climate of your city and present it in class during the second week of April.

Second, to determine the possible future for your city, you will need to research past variations of its climate and the IPCC Fourth Assessment Report, particularly, the projections for your region. What happened in that location during the last ice age? Have there been warmer or cooler periods there? What was happening around the rest of the world during these times. You must also consider effects of all the climate variations such as ENSO, NAO, PNA, AAO, sunspot cycles, and secondary factors such as sea level rise or fall, increasing or decreasing rainfall, and changes in major air mass origins and circulations. What does the IPCC project for your region and factors (sea level, rainfall distributions, glacial melting, etc.) project? Also examine possible adaptation and mitigation strategies for your city and scenario. What are the people and government of your city doing to prepare for climate change? Economic and societal consequences could also be considered.

The final projects will be presented at the “Climate Symposium” during the afternoon of Monday, May 5, 2014 (the final exam is scheduled for that morning). Each presentation is expected to take 10 - 12 minutes. We will have some working sessions with PowerPoint during the second half of some classes. Keep in mind that all images and facts must be referenced!

1 In lieu of a final exam