1077-VH-1708   **Marshall A Whittlesey*** (`mwhittle@csusm.edu`), Department of Mathematics - CSUSM, 333 South Twin Oaks Valley Road, San Marcos, CA 92078. *A course in spherical geometry and its applications for math majors.* Preliminary report.

Spherical geometry is a subject that gets much less attention in high school and collegiate education now than it did 50 or 100 years ago. In this talk I will scan a number of traditional theorems of spherical geometry - some of which are well-known and some of which are not. Then I will discuss some of the interesting applications in other fields: astronomy, plate tectonics and crystallography. While the subject material is something all mathematicians should know something about, I believe this subject as a course works very well for students who are not going on to graduate school - e.g., for those who may be considering a career in high school teaching. For such students, a broad knowledge of applications of mathematics may be just as important as a knowledge of modern mathematics. I will also illustrate how there are opportunities in studying spherical geometry to motivate some of the ideas of more modern abstract mathematics. (Received September 20, 2011)