

Basically we distinguish two types of geometry: Euclidean and Non-Euclidean. Everyone meets Euclidean geometry at basic school, but hardly ever a student hear about Non-Euclidean geometry. In this thesis, we are dealing with spherical geometry, which is a special part of Non-Euclidean geometry. We introduce basic concepts of spherical geometry in the thesis. A more detailed description is devoted to spherical trigonometry, which studies characteristics of spherical triangle and solves the corresponding problems. We also discuss differences between Euclidean and Non-Euclidean geometry. As a part of the thesis we developed an educational software for drawing on the spherical surface. The software is intended as an educational instrument for teaching spherical geometry. The program allows a student to draw shapes like a point, an abscissa, a circle and triangle. Further, the student can measure a length or an angle, which characterizes the differences between Euclidean and Non-Euclidean geometry in the best way. Our educational program improves user's stereometric imagination since the drawn shapes can be displayed from different visual angles.