Swihart Ch. 1 Main Concepts

Polar, Cartesian, and spherical coordinates

Astronomical (spherical) coordinate systems (4 of them)

1. Latitude/longitude (Earth system)
2. Altitude/azimuth system (local sky)
3. Celestial (equatorial) system (RA, DEC)
4. Hour angle/DEC system (HA, DEC)

Timekeeping aspects…

Relation of HA of object (in local sky) to RA and LST

Relation of LST (at point on Earth) to MST for day of year

Relation of HA of object (in local sky) to UT, day of year, longitude, RA

Extra: Celestial Sphere and Vectors

Details of celestial sphere

Celestial sphere and local sky connection

Vectors

Dot and cross product

Unit vectors