PHY105 - The Celestial Sphere

Aims
Background
Text books

Syllabus

The celestial sphere

II. Spherical geometry
i. introduction
ii. the geometry of the sphere
iii. spherical trigonometry
iv. position on the earth's surface
v. example problems

III. The celestial sphere
i. introduction
ii. coordinate systems
a. the horizontal coordinate system
b. the equatorial coordinate system
c. the ecliptic coordinate system
d. the galactic coordinate system

iii. timekeeping systems
a. sidereal time
b. solar time
c. universal time
d. the calendar
iv. example problems

IV. Celestial mechanics
i. ptolemy, copernicus and galileo
ii. kepler's laws
a. planetary distances
b. kepler's first law
c. kepler's second law
d. kepler's third law

iii. newton's laws
a. newton's laws of motion
b. newton's law of gravitation
c. newton's derivation of kepler's laws
d. orbital motion
iv. example problems