Astro 100 Exam I Study Guide

Topics (not exhaustive, but covers the most important material)

Acceleration Asteroids Atomic Number Atoms Brahe Chemical Reactions, Nuclear Reactions Comets **Comparative Planetology** Copernicus Densities of Planets and Sun Distance, Velocity, Time Distances of Planets from Sun (in AU) **Doppler** Effect **Dwarf Planets** Egyptian and Julian Calendars Einstein, matter and energy equivalence Electrons Energy, forms and conservation Equinoxes and Solstices Features of Planets Fluorescence Frequency, Wavelength, and Speed of Light (terms and relationship) **Fundamental Particles** Galileo Geocentric Model Greenhouse Effect Jovian Planets, Terrestrial Planets Kepler, and his Laws Kuiper Belt Objects Light Mass, Weight Metric Unit Prefixes (centi, kilo, mega, etc.) Molecules Momentum Months Moon's Orbit Around Earth Newton, and his Laws of Motion and Gravity Number of Galaxies Number of Stars in Visible Universe, in a Galaxy **Oort Cloud Objects**

Orbit of a Planet around Sun (ecliptic plane, perihelion, aphelion) Order of Magnitude Calculations Parsec, AU, Light•year Phases of Matter (common: solid, liquid, gas, and plasma) Phases of Moon Photons Power Protons, Neutrons Ptolemaic Model Quarks Radius of Planets and Sun (in R_{earth}) Seasons on Earth Spectra Speed of Light Strong Force, Electric Force, roles in binding atoms Synchronous Rotation Temperatures of Planets and Sun Tidal Force, Tides Wavelength Rule for Observations