Astronomy 103 Exam 1 – Review Sheet

• Segment 1
  o Lecture Tutorial Sun Size – emphasized proportional reasoning through comparing the sizes of things – Earth, Moon, Lunar orbit, Sun, Earth Orbit
  o What’s in the Solar System, Milky Way Galaxy, Universe (Worksheet)
    ▪ Rank objects in order of increasing/decreasing distance
  o Special Units
    ▪ What unit would you used to express the distance to a globular cluster?
  o Look-back time

• Segment 2
  o List the ways in which astronomy was important to ancient peoples
  o Describe the basic observations one can make in the night sky
    ▪ Diurnal motions – all objects rise in the east and set in the west (except circumpolar stars)
      ▪ Lecture Tutorial on Position
    ▪ Planet’s (and sun and moon) wander among background stars
    ▪ Mars, Jupiter, and Saturn make retrograde loops at opposition
    ▪ Mercury and Venus are always near the sun
    ▪ Parallax was not observed
  o Describe the functionality of Stonehenge (ArcheoAstronomy Worksheet)

• Segment 3
  o Describe the Ptolemaic Geocentric model
    ▪ Explain the basic observations in terms of this model (Ptolemaic Model Worksheet)

• Segment 4
  o Describe the Copernican Model
  o Know Elongation (Worksheet) and the special configurations
  o Know Sidereal/Synodic Periods

• Segment 5
  o Kepler’s Laws
    ▪ NAAP Lab
    ▪ Lecture Tutorial Kepler’s 2nd Law

• Segment 6
  o Galileo (telescope usage)
    ▪ Scientific Method
    ▪ Describe observations made in support of Copernican Model
  o Newton
    ▪ 3 Laws of Motion (Worksheet)
    ▪ Law of Gravity (Worksheet)