SYLLABUS

1. Introduction ($\sim$ 5 lectures)
   History, Celestial Mechanics, Radiation (incl. Spectroscopy, Luminosity, Black-Body radiation), Special Theory of Relativity

2. Stars ($\sim$ 6 lectures)
   Classifications, stellar structure, evolution (including details of nuclear burning, gravitational collapse, supernovae), possible final outcomes (white dwarfs, neutron stars, black holes) and physical consequences

3. Large Scale Structures of the Universe ($\sim$ 2 lectures)
   Galaxies (types, formation, evolution), Galactic clusters, unsolved problems

4. Topology of the Universe ($\sim$ 6 lectures)
   Topological possibilities, Physics in curved space-times, Qualitative Introduction to General Relativity and some applications

5. The Early Universe ($\sim$ 6 lectures)
   Evolution (including: models, baryogenisis, nucleosynthesis), Particle Physics relevant to the very early universe, Inflationary models and the problems they help solve