Cosmology (M24)

Paul Shellard

This course covers the last 13.8 billion years of the evolution of your universe, from the initial inflationary quantum perturbations to the creation of galaxies we observe today. The course will follow the following format

1. Geometry and Dynamics
2. Inflation
3. Cosmological Perturbation Theory
4. Structure Formation
5. Thermal History
6. Initial Conditions from Inflation

Pre-requisites

This course is taught in a self contained manner so could be attempted by any sufficiently keen part III student but some basic knowledge of Relativity, Quantum Mechanics and Statistical Mechanics will likely be quite helpful.

Literature

1. Dodelson, *Modern Cosmology*
2. Kolb and Turner, *The Early Universe*
3. Weinberg, *Cosmology*

Additional support

Four examples sheets will be provided and four associated examples classes will be given.