Outline:

(I) Basics of weak gravitational lensing:
- Distortion and Magnification
- Brightness moments and ellipticities
- Principle of shape measurements; shear estimates
- Observational issues

(II) Galaxy clusters as lenses:
- Arcs, arclets and multiple images
- Strong lensing results
- Clusters as `natural telescopes'
- Weak lensing in clusters -- mass reconstruction
- Mass determinations and degeneracies

(III) Lensing by the large-scale structure:
- Principle of cosmic shear -- from 3D to projected power
- Shear correlations and related statistics
- E- and B-mode shear
- Measurements of cosmic shear
- Intrinsic alignments
- Future surveys and forecasts

(IV) The galaxy-mass correlation in cosmology:
- Principle of galaxy-galaxy lensing
- Measures of GGL lensing
- Galaxy bias and correlation coefficient
- GGL and the halo model
- Cosmology from GGL
- Higher order mass-shear correlations