Degree: M.Sc. in Astrophysics

Modules:  
astro830  Elective Advanced Lectures  
astro840  Observational Astronomy

Course:  
Observational Cosmology

Course No.:  astro845

<table>
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<th>Category</th>
<th>Type</th>
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<td>English</td>
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Requirements:

Preparation:

Form of Testing and Examination:
Requirements for the submodule examination (written or oral examination): successful work with the exercises

Length of Course:
1 semester

Aims of the Course:
Students with B.Sc. in Physics will be introduced to past and current experiments in cosmology, with some bias toward radio- and submillimeter astronomy

Contents of the Course:
Brief history of cosmology and its initial discoveries: cosmic expansion, cosmic microwave background. Overview of modern cosmological experiments, their major aims and technology. Aims: constraints on Big Bang and dark energy, CMB power spectrum and polarization, Sunyaev-Zeldovich effect, Supernova Ia distance measures, structure /cluster /galaxy formation, epoch of reionization, high-redshift galaxies and quasars. Experiments: APEX, LOFAR, Planck, Herschel, ALMA, SKA. Techniques: bolometer, HEMT

Recommended Literature:
J. A. Peacock; Cosmological Physics (Cambridge University Press 1998)

Contemporary Review Articles