

Modules:

astro830 **Elective Advanced Lectures**
 astro840 **Observational Astronomy**

Course:

Wave Optics and Astronomical Applications

Course No.: astro846

Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture	English	2	3	ST

Requirements:**Preparation:****Form of Testing and Examination:**

Written or oral examination

Length of Course:

1 semester

Aims of the Course:

Acquire the fundamentals necessary to carry out research projects in the field of wave optics and astronomical infrared interferometry

Contents of the Course:

Fundamentals of wave optics; Fourier mathematics; digital image processing; Michelson interferometry; speckle interferometry; speckle holography; Knox-Thompson method; bispectrum-speckle interferometry; interferometric spectroscopy; infrared-long-baseline interferometry; optical phase-closure method; infrared interferometry of young stars and stars in late evolutionary stages and in nuclei of galaxies

Recommended Literature:

Lecture Notes

J. W. Goodman; Introduction to Fourier Optics (Roberts & Company Publishers 3rd edition, 2004)