The aim of the course is to offer an in-depth overview of optical instruments that are not usually considered basic, but the use of which, however, is essential in many industrial, metrological, control, and biomedical applications. The course begins with the definition of the additional optical parameters and the optical systems components that are needed to obtain an effective and operative description of the instruments. It goes on to analyse the function, the design and the characteristics of optical instruments which include elements such as: systems with a constant increase, telecentric systems, anamorphic systems. Finally, applications in which this type of advanced optical instruments making a special emphasis in Photomicrography and Specialized Optical Microscopy.

CONTINGUTS

Section 1: Introduction to the optical instruments.

Section 2: Importance of the diaphragms in the optical instruments.

Section 3: Non standard applications of optical components in the optical

Section 4: Photomicrography
Section 5: Specialized Optical Microscopy techniques

SISTEMA DE QUALIFICACIÓ

Two aspects are assessed: students' knowledge of the topics covered in the first part of the course and the assignment they have carried out. The first evaluation involves a written test and the second the presentation of the assignment.

NORMES PER A LA REALITZACIÓ DE LES PROVES.

The usual in University teaching

BIBLIOGRAFIA

Bàsica:

Complementària: