Introduction to Photonics. Optics and Lasers presents a general overview of the world of Photonics, introducing the fundamental aspects concerning light and its propagation and interaction with matter. At the same time, the state-of-the-art in research and the variety of applications in Science and Technology brought about by Photonics are reviewed.

This Course will be given during the first semester, so that the general knowledge gained with it should allow the student to better follow the different courses of the Master, in any of the itineraries he/she can choose.
### Content

**-Introduction**

Degree competences to which the content contributes:

**-Light. Fundamental characteristics**

Degree competences to which the content contributes:

**-Light-matter interaction**

Degree competences to which the content contributes:

**-Free propagation of light in uniform media.**

Degree competences to which the content contributes:

**-Propagation of light in bounded and non-uniform media (linear effects)**

Degree competences to which the content contributes:

**-Applications and Research. Photonics in different Sectors**

Degree competences to which the content contributes:

### Qualification system

Work done by the student (alone or in group) and lecture and activities attendance: up to 40%.
Partial (and, if necessary, global) examinations: 60% at least.

### Regulations for carrying out activities

The usual in university teaching
Bibliography

Basic:


Complementary:

