Representative examples of devices and systems for light generation, processing and detection are treated, together with the basic interface electronics for applications in measurement and communications systems.

Teaching staff

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Others: ADOLFO COMERON TEJERO
        MARÍA CONCEPCIÓN SANTOS BLANCO

Teaching methodology

Presencial teaching + activities

Learning objectives of the subject

Representative examples of devices and systems for light generation, processing and detection are treated, together with the basic interface electronics for applications in measurement and communications systems.
### Content

- **Basic concepts in optoelectronics systems and devices.**
  
  Degree competences to which the content contributes:

- **Engineering of light manipulation devices**
  
  Degree competences to which the content contributes:

- **Engineering of optical detection systems**
  
  Degree competences to which the content contributes:

- **Engineering of light emitting systems.**
  
  Degree competences to which the content contributes:

(ENG) (CAT) - Electromagnetic propagation in anisotropic media Graphical representations

  Degree competences to which the content contributes:

(ENG) (CAT) - Electro-optics polarization density response and index ellipsoid contracted notation

  Degree competences to which the content contributes:

(ENG) (CAT) - Electro-optic devices Pockels and Kerr cells, dynamic wave retarders Bulk optical modulators Integrated electro-optical modulators

  Degree competences to which the content contributes:

(ENG) (CAT) - Example of electro-optical and optoelectronic system

  Degree competences to which the content contributes:

(ENG) (CAT) - Signal-to-noise ratio Unified approach to PIN, APD and PTM signal

  Degree competences to which the content contributes:
Qualification system

.2 tests during the semester (40%)
.1 Final examination (60%).

Regulations for carrying out activities

The usual in University teaching

Bibliography

Basic:

Complementary: