The course focuses on modern signal and image processing algorithms and architectures, as well as implementation techniques. Some of the most important applications of optics, optoelectronics and computers are in image sensing, communications, and processing systems that are no longer extremely high cost but currently available for many commercial applications. The course covers recent advances in image sensing and processing systems, non-linear distortion tolerant image recognition, 3D imaging and processing systems, multidimensional information security systems, inspection by machine vision, and other applications.
Content

Background on digital optical image processing

Degree competences to which the content contributes:

Restoration, enhancement and image analysis

Degree competences to which the content contributes:

Computer generated holography

Degree competences to which the content contributes:

Pattern recognition

Degree competences to which the content contributes:

Image transmission and coding

Degree competences to which the content contributes:

Optical security

Degree competences to which the content contributes:

3D imaging and processing systems

Degree competences to which the content contributes:

Color image processing. Multidimensional image processing

Degree competences to which the content contributes:

Image processing in Microscopy

Degree competences to which the content contributes:
Human vision models applied to machine vision

Degree competences to which the content contributes:

Qualification system
To be determined according to the general policy of the Master committee
Possibilities: exam, problem work out, short presentation, etc

Regulations for carrying out activities
The usual in university teaching

Bibliography

Basic:

Complementary: