



Denumirea disciplinei	Prelucrarea semnalelor
Codul disciplinei	S.06.O.042
Tipul disciplinei	De specialitate, obligatorie
Anul de studiu / semestrul	Anul III, semestrul VI
Limba de predare	Engleză
Credite ECTS	4
Numărul de ore de contact/ Numărul total de ore	55/120
Evaluare	Examen
Titularul cursului	Dr.hab., prof. univ. Veaceslav Perju

Conținutul cursului:

Introduction to Signal processing.
The presentation of the signals
The functional processing of the signals
Fourier transformation
Unitary transformations of the signals
Signals filtering on the base of 2D convolution
Restoration of the signals on the base of filtering
Contrast manipulation
Signals detection
Electronic signal processing
Optical signal processing
Optical electronic signal processing
Design of the signal processing systems

Finalități de studiu:

La finalizarea acestui curs, studentul trebuie să demonstreze următoarele cunoștințe, abilități și competențe:

- to operate with terminology of the processing of the optical signals;
- to reproduce the algorithms of optical signal processing operations;
- to apply the knowledge from optical signals processing in resolving of the different applied problems;
- to elaborate the software realizing signals processing algorithms;
- to carry out the investigations of the optical signals processing algorithms;
- to elaborate the new algorithms for optical signals processing.

Bibliografie:

1. Cichocki S., Amari S. Adaptive blind signal and image processing. John Wiley&Sons, Ltd. Revised and corrected edition, 2003. 588 p.
2. Jahne B. Digital Image Processing. Springer, 2002. 598 p.
3. Pratt K.W. Digital Image Processing. John Wiley&Sons, Ltd, 2001. 738 p.
4. Dumitrescu B. Prelucrarea semnalelor. Universitatea "Politehnica" București. 2006. www.schur.pub.ro/download/ps/CursPS-6.1.pdf.
5. www.signalprocessingsociety.org – IEEE Signal Processing Society