UCLouvain

wsbim2243

2023

Digital processing of medical images

4.00 credits	30.0 h + 15.0 h	Q2

Teacher(s)	Macq Benoît ;
Language :	French
Place of the course	Bruxelles Woluwe
Main themes	A) Extension of the signal notion to images - Basics on main medical imagers - Main features of medical images B) Introduction to medical images processing - Filtering methods - Basics on mathematical morphology - Analysis and segmentation C) Viewing algorithms - Surfaces viewing - Volumes viewing - Animation D) Implementation - Introduction to coding and transmission - Software integration E) Applications - 2D imagery - 3D imagery.
Learning outcomes	**At the end of this learning unit, the student is able to :** 1 This class is devoted to the methods of medical images quantitative analysis. The theory is illustrated with exercices and demonstrations including examples of anatomical and functional medical images processing.
Content	Basics on main medical imagers. Notion of signal; extension to images. Main features of medical images. Introduction to medical images processing. Filtering methods. Basics on mathematical morphology. Analysis and segmentation. Viewing algorithms. Surfaces viewing. Volumes viewing. Animation. Implementation. Introduction to coding and transmission. Software integration. Applications. 2D imagery. 3D imagery.
Other infos	Oral examination
Faculty or entity in charge	SBIM

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Statistics: Biostatistics	BSTA2M	4		