


4 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<br>B) Introduction to medical images processing - Filtering methods - Basics on mathematical morphology - Analysis and segmentation<br>C) Viewing algorithms - Surfaces viewing - Volumes viewing - Animation<br>D) Implementation - Introduction to coding and transmission - Software integration<br>E) Applications - 2D imagery - 3D imagery.   |
| Aims                        | <p>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.</p> <p>-----</p> <p><i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i></p> |
| 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                 | Prerequisite: a signal processing class (e.g.: SBIM 2241 Biomedical signals acquisition and processing). As indicated, basics on main medical imagers (e.g.: INIS 2103 Medical imaging) will be briefly recalled in the introduction. Oral examination   |
| Faculty or entity in charge | SBIM   |

| <b>Programmes containing this learning unit (UE)</b> |         |         |              |   |
|--|---------|---------|--------------|---|
| Program title  | Acronym | Credits | Prerequisite | Aims  |
| Master [120] in Statistic:<br>Biostatistics          | BSTA2M  | 4       |              |  |