

<b>ID</b>	2384
<b>Curricular Unit</b>	Instrumentation and Applied Measurement in Physical Therapy
<b>Regent</b>	Pedro Luís Camecelha de Pezarat Correia
<b>Learning Outcomes</b>	To introduce the use of computer technology in physiotherapy. To provide the student with the theoretical basis and practical experience associated with techniques used in physiotherapy research. To discuss the fundamentals of instrumentation of biomechanical and physiological measures, applied in a clinical context. To gain the necessary knowledge and skills for data acquisition, processing and interpretation of electrophysiological, kinematic and kinetic data.
<b>Syllabus</b>	<ul style="list-style-type: none"> <li>Computer, bits, bytes, RAM</li> <li>Harddisk, Monitor, Printer</li> <li>CPU, Intel, MacIntosh, Unix, DOS, MacOS</li> <li>User programs, Multimedia</li> <li>Networking, e-mail, Internet</li> <li>Nyquist theory</li> <li>Data processing</li> <li>Instrumentation technology</li> <li>AD Conversion</li> <li>Triggering</li> <li>Synchronization</li> <li>Electromyography</li> <li>Kinematic analysis</li> <li>Dynamics</li> <li>Force platform</li> <li>Dynamometry</li> </ul>
<b>Evaluation</b>	Written exam
<b>Bibliography</b>	Steven W. Smith (1999), The Scientist and Engineer's Guide to Digital Signal Processing (Second Edition)