

<b>Course unit title:</b>	Information Visualization
<b>Course unit code:</b>	INS612
<b>Type of course unit:</b> (Compulsory/optional)	Optional
<b>Level of course unit:</b> (First, second or third cycle)	Master (2 <sup>nd</sup> Cycle)
<b>Year of study:</b>	1 or 2
<b>Semester when the unit is delivered:</b>	2 or 3
<b>Number of ECTS credits allocated:</b>	8
<b>Name of lecturer(s):</b>	TBA
<b>Learning outcomes of the course unit:</b>	
<p>Upon successful completion of this course students should be able to:</p> <ul style="list-style-type: none"> <li>• Explain the concept of information visualization.</li> <li>• Apply various information visualization techniques.</li> <li>• Select an appropriate technique for the purpose.</li> <li>• Discuss the various issues related to business intelligence and information visualization.</li> <li>• Analyze and evaluate information visualization techniques.</li> </ul>	
<b>Mode of delivery:</b>	Face- to- face
<b>Prerequisites and co-requisites:</b>	None
<b>Recommended optional program components:</b>	None
<p><b>Course Contents:</b></p> <p><b>Objective:</b></p> <p>The course teaches the various ways used to present information in a meaningful way. The course is focused on 2D and 3D techniques used in visualizing information, together with supporting perceptual principles. It is structured to provide both experiences with real data and tools as well as a broad view of the rich world of information visualization.</p> <p>This is related to specific objectives 5 to 8.</p> <p><b>Description:</b></p> <p>Introduction to information visualization: Introduce the concept, tools, methods, applications.</p>	

<p>Data sources and representations: Sources of data; acquiring data; structuring data; continuous, sampled, discrete datasets.</p> <p>Information visualization techniques: Tableau; graphs and tables; trees and networks; interactive visualization, 2D, 3D n-D techniques and new techniques, etc.</p> <p>Implementation: Introduction to tools used to implement information visualization applications.</p> <p>Business Intelligence: Effective use of information visualization to achieve business intelligence. The need for multi-device (smartphones, tablets, PCs) and multi-platform application of business intelligence.</p>					
<p><b>Recommended or required reading:</b></p>	<p>Card, K.S., Mackinlay, J., &amp; Shneiderman, B. (1999). Readings in Information Visualization: Using Vision to Think (Interactive Technologies). San Francisco, CA: Morgan Kaufmann.</p> <p>Chen, C. (2006). Information Visualization: Beyond the Horizon. London: Springer.</p> <p>Ware, W. (2004). Information Visualization, Perception for Design. San Francisco, CA: Morgan Kaufmann.</p> <p>Spence, R. (2007). Information Visualization: Design for Interaction. Upper Saddle River, NJ: Prentice Hall.</p> <p>Telea, A. C. (2007). Data Visualization. Wellesley, MA: A K Peters.</p> <p>Journals: IEEE Transactions on Visualization and Computer Graphics Information Visualization Journal</p>				
<p><b>Planned learning activities and teaching methods:</b></p>	<table border="1" style="width: 100%;"> <tr> <td style="width: 60%;">Class Instruction</td> <td style="width: 40%; text-align: center;">42 Hours</td> </tr> <tr> <td>Consultation</td> <td style="text-align: center;">30 Hours</td> </tr> </table>	Class Instruction	42 Hours	Consultation	30 Hours
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<b>Assessment methods and criteria:</b>	<table border="1"> <tr> <td data-bbox="630 226 1078 264">Examinations</td> <td data-bbox="1078 226 1313 264">50%</td> </tr> <tr> <td data-bbox="630 264 1078 302">Project Work/ Class</td> <td data-bbox="1078 264 1313 302">50%</td> </tr> <tr> <td data-bbox="630 302 1078 340">Participation</td> <td data-bbox="1078 302 1313 340">100%</td> </tr> </table>	Examinations	50%	Project Work/ Class	50%	Participation	100%
Examinations	50%						
Project Work/ Class	50%						
Participation	100%						
<b>Language of instruction:</b>	English						
<b>Work placement(s):</b>	No						
<b>Place of Teaching:</b>	Regular Classroom European University Cyprus, Nicosia  Computer Laboratory European University Cyprus, Nicosia						