UCLouvain

lcomu2811

2019

In view of the health context linked to the spread of the coronavirus, the methods of organisation and evaluation of the learning units could be adapted in different situations; these possible new methods have been - or will be - communicated by the teachers to the students.

5 credits	30.0 h	Q2

Teacher(s)	Kieffer Suzanne ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	· Visual perception · Representation (encoding of values, of relations) · Presentation (visualization techniques) and interaction · Design principles (Gestalt, Bertin, color theory) · Dashboards and visual analytics
Aims	1. Describe data visualizations in terms of data type, data representation, presentation and interaction technique, and user task ; - - - - 2. Explain the different stages involved in the development of interactive visualizations by illustrating each step through its typical results (e.g. deliverables) ; - - - - 3. Apply Information Visualization principles and techniques to design and develop an interactive visualization of a large data set ; - - - - 4. Evaluate a visualization using criteria and propose improvements. - - - - *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".*
Evaluation methods	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** Formative assessment including individual assignments, group assignments and knowledge tests. The validation of the credits associated with this course requires the success of each of these activities. All relevant information related to these terms and conditions is available on Moodle.
Teaching methods	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** Hybrid teaching combining lectures, flipped classroom and teaching by project
Content	• Visual perception • Processing, representation and presentation of data • Interaction with data • Design principles • Trends: dashboards and visual analytics
Inline resources	• Moodle: slides, bibliography, workshops, assignments, models and evaluation criteria grids • Web: videos, blogs, websites, online software

Bibliography	Bateman, S., Mandryk, R. L., Gutwin, C., Genest, A., McDine, D., & Brooks, C. (2010, April). Useful junk?: the effects of visual embellishment on comprehension and memorability of charts. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (pp. 2573-2582). ACM. Bertin, J. (1983). Semiology of graphics; diagrams networks maps (No. 04; QA90, B7.). Cairo, A. (2015). Graphics lies, misleading visuals. In New Challenges for Data Design (pp. 103-116). Springer, London. Heer, J., Bostock, M., & Ogievetsky, V. (2010). A tour through the visualization zoo. Commun. Acm, 53(6), 59-67. Fox, W. Statistiques sociales. Traduction et adaptation de la troisième édition américaine par Louis Imbeau, De Boeck, 1999. Spence, R. Information Visualization: Design for Interaction. 2007. Tufte, E. The visual display of quantitative information, 2nd edition. Graphics Press. 2001. Ware, C. Information Visualization, 3rd Edition, Perception for Design. Morgan Kaufmann. 2012.
Other infos	Some teaching resources are in English.
Faculty or entity in charge	COMU

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Information and Communication Science and Technology	STIC2M	5		
Master [120] in Communication	CORP2M	5		
Master [60] in Information and Communication	COMU2M1	5		