UCL Université catholique de Louvain

LINMA2472

2015-2016

Advanced topics in discrete mathematics

5.0 credits	30.0 h + 22.5 h	1q

Teacher(s) :	Blondel Vincent (coordinator) ; Delvenne Jean-Charles ; Krings Gautier (compensates Blondel Vincent) ;
Language :	Français
Place of the course	Louvain-la-Neuve
Inline resources:	> http://icampus.uclouvain.be/claroline/course/index.php?cid=LINMA2472
Prerequisites :	A sufficient knowledge of linear algebra and graph theory is required (such as given in LFSAB1101, LFSAB1102, LINMA1691).
Main themes :	The course offers an introduction to an advanced and (if possible) current issue of discrete mathematics.
Aims :	Learning outcomes : -- AA1 : 1,2,3 -- AA3 : 1,3 -- AA4 : 1 -- AA5 : 1,2,3, 5,6 More specifically, at the end of the course the student will be able to : -- read a general or specialized literature on a specific cutting-edge theme of discrete mathematics, and summarize the key messages and results -- explain those messages to their peers in a clear and precise way -- solve mathematical problems in application to those results -- identify the possible caveats of those results and criticize the exposition chosen by the references -- relate the concepts encountered in the literature to concepts covered in other course, despite different notations or viewpoints The mathematical objectives can change from year to year. *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 :	Oral exam with written preparation.
Teaching methods :	In part ex cathedra, and in part presented by the students themselves based on a book chapter of other documents.
Content :	The course contents may vary from one year to another and can tackle, for example, graphs and networks issues, discrete dynamical systems, coding, data mining, algorithmics, and questions at the interface with theoretical computer science.
Bibliography :	Variable.
Faculty or entity in charge:	MAP

Programmes / formations proposant cette unité d'enseignement (UE)				
Intitulé du programme	Sigle	Credits	Prerequis	Acquis d'apprentissage
Master [120] in Mathematical Engineering	MAP2M	5	-	