Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
LFM 521	Simulation with Applications in Logistics	2	3	0	0	3	6

Prerequisites	
Admission Requirements	

Language of Instruction	English
Course Type	Compulsory
Course Level	Masters Degree
Objective	Simulation is a statistical computer-based technique to model and analyze complex, real-life problems. This course aims at enabling students to model real-life logistics problems through simulation models, estimate several performance measures through statistical analysis, analyze the sensitivity of the system to various parameters, and find the optimum operating conditions. The objectives of the course are determined as follows: • Introduce how to build simulation models of real-life problems • Enable students to use the statistical techniques efficiently • Enable students to use softwares such ARENA and MATLAB efficiently and effectively • Enable students to use sensitivity analysis and simulation-based optimization techniques
Content	
References	Law, A.M., “Simulation Modeling and Analysis”, 4. Edition, McGraw-Hill, New York, 2007 Kelton, W.D., Sadowski, R.P., Sturrock, D.T., “Simulation with ARENA”, 3. Edition, McGraw-Hill, New York, 2003 Kleijnen, J.P.C., “Design and Analysis of Simulation Experiments”, Springer, New York, 2008 Alexopoulos, C., Seila, A., “Output data analysis”, Chapter 7 in Handbook of Simulation, Wiley, New York, 1998

Theory Topics

Week	Weekly Contents