Code	INI393L	Prerequisites	INI391 INI391L
Name	Laboratorio de Investigación Operativa II	Co-requisites	INI393

Credits	Contact Hours
01	22
Categorization of credits	
Math and basic science	
Engineering topic	X
Other	

Coordinator's name	Prof. Karl Corporan

Text book
Other supplementary materials
Kelton , Sadowski & Sturrock (2008). Simulation with Software Arena (4th Edition) Taha, H. (2012). Operations Research 9th Edition. Pearson. Hillier, F. & Lieberman, G. (2013). Introduction to Operations Research 9th edition. McGrawHill . Winston, W. Bruna, M. & Sanchez , F. (2008). Operations Research: Applications and Algorithms 4th Edition. Thompson Reports (2018). Reports Transactions on Education. Retrieved from http://pubsonline.informs.org/loi/ited Ifors (2018). International Transactions in Operatios Research. Retrieved from http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1475-3995

Description	
This course covers the use of computational models and simulation for the analysis, proposal of solutions and evaluation of the same in engineering problems based on mathematics, science and engineering criteria. This subject contains the topics of Montecarlo Simulation, Computational Simulation and Simulation of Queues. It is supported by the use of specialized software in Spreadsheets and Simulation Discreet.	
Type of course	☒ Required ☐ choice

Specific goals for the course	
Outcomes of instruction	EG1. Set the objectives of the experiment and select the critical factors, as well as all the answers relevant to the experiment. EG2. Plan and conduct the experiment comprehensively Observing and interpreting the behavior of variables throughout the runs. EG3. Argue the results obtained based on the evidence and in the analysis of experimentation, making recommendations the application of the results.
Student outcomes	CG1. Develop and conduct appropriate experimentation, analyzes and interprets data, and uses engineering criteria to draw conclusions.

topics
Unit I. Introduction to simulation Unit II. Basic Computer Simulation Unit III. Running a simulation project Unit IV. Simulation animation