

SUBJECT SYLLABUS ACADEMIC OVERVIEW INTERNATIONAL SCHOOL OF ECONOMIC & ADMINISTRATIVE SCIENCES

COURSE NAME AND CODE: Operations Optimization (81135)

PROGRAM:

Bachelor of Business Administration (BBA)

Bachelor of International Marketing & Logistics Administration (BIMLA)

LEVEL OF STUDY: Undergraduate Programme

	GENERAL ACADEMIC INFORMATION							
LATEST UPDATE	2020-2							
ACADEMIC DEPARTMEN T	Operations Management							
SUBJECT TYPE	Mandatory							
LANGUAGE	Spanish							
SENJESTED	Programme Semester							
SEIVIESTER	BBA 6			5				
	Ŀ	BIMLA 3						
NUMBER OF								
ACADEMIC	4							
CREDITS		Ι				1		
HOURS OF								
ACADEMIC	192	CONTACT HOUR	S 64	H H	OURS OF INDEPENDENT/AUTONOMOUS WORK	128		
WORK								
LEARNING PREREQUISIT ES	• Ma of	aster basic mather three.	natical conce	epts, such a	s mathematical analysis, solution of linear equatio	ns and handling of rules		



INTERNATIO NAL COMPONENT	 Vocabulary and technical language to communicate in different cultural contexts. 							
SUSTAINABL E DEVELOPME NT GOALS (SDG) COURSE DETAI	9. Industry, Innovation, and Infrastructure							
COURSE	This subject em	powers the student to develop s	kills to define	solutions optimizing the use of com	panies' resource	es, through a		
DESCRIPTION	systematic and scientific approach for the analysis of administrative and operational problems, based on mathematical models.							
	EICEA ILOS or Programme ILOS	Course ILOS	Туре	Content	Teaching and Learning strategy	Assessme nt Method		
COMPETENC ES DEVELOPED	ILO01	Know the importance of the Optimization of Operations in the competitiveness of organizations in a global environment	Knowledge	 Introduction to linear programming: history, applications and success stories worldwide. Network problems: applications and success stories worldwide. Whole programming: applications and success stories worldwide. Multi-objective programming: applications and success stories 	Theoretical Class	Formative Assessme nt		



11.000	tale attraction of the state	CL		F	c
ILO02	identify and know the	Skill	- Mathematical modeling	Experiment	Summativ
	different classic models and			Based	e
BIMLA ILO08	methodologies to face		- Graphical solution method	Learning	Assessme
	Operations Optimization		- Simplex algorithm and special		nt
	problems.		cases		
			 Classic problems 		
			- Introduction to linear		
			programming: history,		
			applications and success stories		
			worldwide.		
			- Network problems: applications	Theoretical	Formative
			and success stories worldwide.	Class	Assessme
			- Whole programming:	01000	nt
			applications and success stories		
			worldwide.		
			- Multi-objective programming:		
			applications and success stories		
			worldwide.		
11.002	Abstract, analyze and	Skill	- Mathematical modeling	Experiment	Summativ
	synthesize situations that may		- Basic formulation	Based	e
11 005	arise in the operations of		- Graphical solution method	Learning	Assessme
12000	organizations		- Simplex algorithm and special	20011118	nt
	organizations		cases		iii iii
			- Classic problems		
			- Troublesbooting using		
			specialized software (MS Excel		
			and GAMS Solver)		
			Sonsitivity and Duality Analysis		
11.005	Knowing how to apply	ckill	Troubloshooting using	Exporimont	Summativ
12005	mathematical models to the	JUIN	- nousieshooting using	Based	Summativ
	mathematical models to the		specialized software (IVIS Excel	Baseu	
BIIVILA ILUU7	context of organizational			Learning	Assessme
	aynamics		Sensitivity and Duality Analysis		nt



			 Mathematical modeling of linear programming problems. Network troubleshooting Troubleshooting through entire programming. Mathematical modeling for multi-objective problem solving. 		
ILO06	Know the importance of the Optimization of Operations in the competitiveness of organizations.	Knowledge	 Introduction to linear programming: history, applications and success stories worldwide. Network problems: applications and success stories worldwide. Whole programming: applications and success stories worldwide. Multi-objective programming: applications and success stories worldwide. 	Theoretical Class	Formative Assessme nt
ILO01: Global V ILO02: Critical T situations. ILO05: Business that create valu	ision: Demonstrate an understand hinking: Evaluate information usi Analytics: Interpret data sets ac e in organizations.	ding of multic ng critical and cording to the	ultural environments both in local an I analytical reasoning to address cha eir different patterns, trends and sc	nging economic enarios using an	and business alytical tools
BIMLA ILO08: U	and principles and concepts of ad lor). pply technical skills associated wi nderstanding marketing tendenc	ministration: I th marketing ies and demoi	Demonstrate specific knowledge in th and logistics in the decision-making p nstrating ability to identify critical co	he field accordin process of the fir mponents in valu	g to the level m. Je chains.



BIBLIOGRAP	•	Hillier, F. S. and Lieberman, G. J. (2015) Introduction to Operations Research. 10th edn. New York, NY: McGraw-Hill Education.
HY	•	Winston, W. L. (2004) Operations Research: Applications and Algorithms. 4th edn. California, US: Thomson Brooks/Cole.