

COURSE: Quantitative Models and Methods in Management II		
DEGREE: Bachelor in Industrial Technology Engineering	YEAR: 4	TERM: 2

WEEKLY PLANNING								
WEEK	SESSION	DESCRIPTION	TEACHING (mark X)		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	WEEKLY PROGRAMMING FOR STUDENT		
			L E C T U R E S	S E M I N A R S		DESCRIPTION	CLASS HOURS (1,66=50+50 min)	HOMEWORK HOURS (Max. Estim. 6,5h)
1	1	General course presentation				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	2	Introduction to simulation, general concepts, stochastic variables				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	
2	3	Model input. Statistical distributions I				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	4	Model input. Statistical distributions II				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	
3	5	Parameter estimation. Curve fitting				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	6	Chi square test in practice I			Comp. Lab	Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	

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4	7	Chi square test in practice II. Random number and random variable generation			Comp. Lab	Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	8	Witness programming introductory notions			Comp. Lab	Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	
5	9	Basic model programming in Witness I			Comp. Lab	Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	10	Basic model programming in Witness II			Comp. Lab	Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	
6	11	Study of a system. Model programming I			Comp. Lab	Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	12	Study of a system. Model programming II			Comp. Lab	Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	
7	13	Study of a system. Model programming III			Comp. Lab	Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	14	Model verification and validation. Result analysis I				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	
8	15	Result analysis II				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	16	Result analysis III. Scenario comparison				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	

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9	17	Experimentation with Witness and comparison of alternatives. Mid-term Exam (Approximate date)			Comp. Lab	Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	18	Introduction to Heuristic Techniques for Combinatorial Optimization problems.				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	
10	19	Tree-search algorithms:				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	20	Breath-first and Depth-first			Comp. Lab	Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	
11	21	Tree-search algorithms:				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	22	Hill-climbing and Best-first				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	
12	23	Tree-search algorithms:				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	24	Constraint Programming.				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	
13	25	Traveling Salesman Problem			Comp. Lab	Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	26	Tree-search algorithms:				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	

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14	27	Branch & Bound				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	6,5
	28	Tree-search algorithms:				Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	
	29	Traveling Salesman Problem with Genetic Algorithms			Comp. Lab	Active class participation. Study of assigned material. Solving the exercises assigned.	1,66	3,25
Subtotal 1							48	94
Total 1 (Hours of class plus student homework)							142	
15		Tutorials, handing in, etc					3,6	-
16		Assessment					4	10
17								
18								
Subtotal 2							8	10
Total 2 (Hours of class plus student homework)							18	
TOTAL (Maximun 160 horas)							160	