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COURSE:	CALCULUS I			
DEGREE:	BACHELOR IN TELEMATICS ENGINEERING		YEAR: FIRST	TERM: FIRST

WEEKLY PLANNING								
WEEK	SESSION	DESCRIPTION	GROUPS (mark x)		Special Room for Session	Indicate YES/NO If the session needs 2 teachers	WEEKLY PROGRAMMING FOR STUDENT	
			LECTURES	SEMINARS			DESCRIPTION	CLASS HOURS
								HOME-WORK HOURS (Max. 7 hs.
1	1	The real line, intervals, inequalities, absolute value, sets in the real line and in the plane, mathematical induction.	x			NO	Review of notions studied in previous years. Study the contents explained in the lectures from the main references. Solve problems described in the lectures.	1,66
1	2	Solve exercises related to the contents in session 1.		x		NO	Solve exercises in the homework sheet related to the session.	1,66
2	3	Elementary functions, elementary transformations, composition of functions, inverse function. Polar coordinates.	x			NO	Study the contents explained in the lectures from the main references. Solve problems described in the lectures.	1,66
2	4	Solve exercises related to the contents in session 3.		x		NO	Solve exercises in the homework sheet related to the session.	1,66
3	5	Limits of functions, definition, main theorems. Evaluation of limits.	x			NO	Study the contents explained in the lectures from the main references. Solve problems described in the lectures.	1,66
3	6	Solve exercises related to the contents in session 5.		x		NO	Solve exercises in the homework sheet related to the session.	1,66
4	7	Continuous functions, properties and main theorems.	x			NO	Study the contents explained in the lectures from the main references.	1,66
4	8	Solve exercises related to the contents in session 7.		x		NO	Solve exercises in the homework sheet related to the session.	1,66
5	9	Differentiation of functions, definition, differentiation rules, differentiation of elementary functions.	x			NO	Study the contents explained in the lectures from the main references. Solve problems described in the lectures.	1,66
5	10	Solve exercises related to the contents in session 9.		x		NO	Solve exercises in the homework sheet related to the session.	1,66
6	11	Main theorems on differentiation. L'Hôpital rule. Extrema of functions.	x			NO	Study the contents explained in the lectures from the main references. Solve problems described in the lectures.	1,66
6	12	Solve exercises related to the contents in session 11.		x		NO	Solve exercises in the homework sheet related to the session.	1,66
7	13	Convexity and asymptotes. Graph of functions.	x			NO	Study the contents explained in the lectures from the main references.	1,66
7	14	Solve exercises related to the contents in session 13.		x		NO	Solve exercises in the homework sheet related to the session.	1,66

HOME-WORK HOURS column values (per week pair): 6,5 (weeks 1, 2, 3, 4, 5, 6, 7)

8	15	Taylor polynomial, definition, main theorems. Evalution of limits with Taylor polynomial. **Quiz 1.**	x				NO	Study the contents explained in the lectures from the main references. Solve problems described in the lectures.	1,66	6,5
8	16	Solve exercises related to the contents in session 15.		x			NO	Solve exercises in the homework sheet related to the session.	1,66	
9	17	Sequences of numbers, main notions, limits of sequences, recurrent sequences.	x				NO	Study the contents explained in the lectures from the main references. Solve problems described in the lectures.	1,66	6,5
9	18	Solve exercises related to the contents in session 17.		x			NO	Solve exercises in the homework sheet related to the session.	1,66	
10	19	Series of numbers, main notions. Tests for convergence for series of positive numbers, absolute and conditional convergence. Leibniz's test. Sum of some series.	x				NO	Study the contents explained in the lectures from the main references. Solve problems described in the lectures.	1,66	6,5
10	20	Solve exercises related to the contents in session 19.		x			NO	Solve exercises in the homework sheet related to the session.	1,66	
11	21	Tayor series, definitions, properties, convergence interval, main examples.	x				NO	Study the contents explained in the lectures from the main references. Solve problems described in the lectures.	1,66	6,5
11	22	Solve exercises related to the contents in session 21.		x			NO	Solve exercises in the homework sheet related to the session.	1,66	
12	23	Integration, antiderivatives, integration by parts, substitution.	x				NO	Study the contents explained in the lectures from the main references. Solve problems described in the lectures.	1,66	6,5
12	24	Solve exercises related to the contents in session 23.		x			NO	Solve exercises in the homework sheet related to the session.	1,66	
13	25	Fundamental theorem of calculus and applications.	x				NO	Study the contents explained in the lectures from the main references.	1,66	6,5
13	26	Applications of integration: areas, volumes and length.	x				NO	Study the contents explained in the lectures from the main references.	1,66	
13	27	Solve exercises related to the contents in session 25 and 26.		x			NO	Solve exercises in the homework sheet related to the session.	1,66	
14	28	Improper integrals. **Quiz 2.**	x				NO	Study the contents explained in the lectures from the main references. Solve problems described in the lectures.	1,66	7,5
14	29	Solve exercises related to the contents in session 28.		x			NO	Solve exercises in the homework sheet related to the session.	1,66	
								Subtotal 1	**48**	**92**
								Total 1 (Hours of class plus student homework hours between weeks 1-14)		**140**
	15	Tutorials, handing in, etc.	x				NO	Tutorías	2	
	16									15
	17	Assessment.							3	
	18									
								Sutotal 2	**5**	**15**
								Total 2 (Hours of class plus student homework hours between weeks 15-18)		**20**
								TOTAL (Total 1 + Total 2. Máx. 180 Horas)		**160**