



COURSE: CÁLCULUS I		
DEGREE: TELECOMMUNICATION TECHNOLOGY ENGINEERING	YEAR: FIRST	TERM: FIRST

WEEKLY PLANNING									
WEEK	SESSION	DESCRIPTION	GROUPS (mark X)		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	Indicate YES/NO If the session needs 2 teachers	WEEKLY PROGRAMMING FOR STUDENT		
			LECTURES	SEMINARS			DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
1	1	Presentation of the subject Theory Unit 1: Proofs	X			No	- Presentation of the subject - Techniques for proof	1,66	6
1	2	Presentation Exercises Unit 1		X		No	- Presentation of the problem classes - Exercises Unit 1	1,66	
2	3	Theory Unity 2: Real numbers	X			No	- Characterization of sets of real numbers - Solution of inequalities	1,66	6
2	4	Exercises Unit 2		X		No	- Exercises Unit 2	1,66	
3	5	Theory Unit 1: Sequences of Real numbers	X			No	- Definition and properties of sequences - Limits of sequences	1,66	6
3	6	Exercises Unit 3		X		No	- Exercises Unit 3	1,66	
4	7	Theory Unit 1: Series of Real numbers	X			No	- Definition and characterization of series - Convergence criteria - Techniques for evaluating sum of series	1,66	6
4	8	Exercises Unit 4		X		No	- Exercises Unit 4	1,66	

5	9	Theory Unit 5: Function of Real Variable	X			No	- Definition and characterization of function - Elementary functions	1,66	6
5	10	Exercises Unit 5		X		No	- Exercises Unit 5	1,66	
6	13	Assessment Test I			Class Room	Yes	- Assessment Test I	1,66	6
6	11	Theory Unit 6: Limits of Functions	X			No	- Definition and properties of limits of functions - Basic techniques to calculate limits - Indeterminations and equivalent infinitesimal	1,66	
6	12	Exercises Unit 6		X		No	- Exercises Unit 6	1,66	
7	14	Theory Unit 7: Continuous Functions	X			No	- Definition and properties of continuous functions - Bolzano's theorem	1,66	
7	15	Exercises Unit 7		X		No	- Exercises Unit 7	1,66	6
8	16	Theory Unit 8: Differentiation	X			No	- Definition and properties of differentiation - Mean value theorem - Rules of differentiation	1,66	
8	17	Exercises Unit 8		X		No	- Exercises Unit 8	1,66	6
9	18	Theory Unit 9: Taylor Polynomial	X			No	- Definition and properties of the Taylor polynomial - Rest of Taylor - Taylor polynomial calculation	1,66	
9	19	Exercises Unit 9		X		No	- Exercises Unit 9	1,66	6
10	20	Theory Unit 10: Sequences and Series of Functions	X			No	- Definition and characterization of sequences of Functions - Definition and characterization of series of Functions	1,66	
10	21	Exercises Unit 10		X		No	- Exercises Unit 10	1,66	
11	22	Assessment Test II			Class Room	Yes	- Assessment Test II	1,66	6
11	23	Theory Unit 11: Integral Calculus	X			No	- Definition of Integral. Riemann sums - Geometric interpretation of the integral - Fundamental Theorem of Integral Calculus - Barrow's Rule	1,66	
11	24	Exercises Unit 11		X		No	- Exercises Unit 11	1,66	6
12	25	Theory Unit 12: Techniques to Calculate Primitives (I)	X			No	- Techniques to calculate primitives - Method of substitution - Method by parts	1,66	
12	25	Exercises Unit 12		X		No	- Exercises Unit 12	1,66	6
13	27	Theory Unit 13: Techniques to Calculate Primitives (II)	X			No	- Integral of rational functions - Change of variable	1,66	
13	28	Exercises Unit 13		X		No	- Exercises Unit 13	1,66	

14	29	Theory Unit 14: Geometrical Applications of the Integration	X			No	- Calculation of areas of plane figure - Volumes of revolution - Lengths of curves	1,66	6
14	30	Exercises Unit 14		X		No	- Exercises Unit 14	1,66	
Subtotal 1								49,8	84
Total 1 (Hours of class plus student homework hours between weeks 1-14)								133,8	
15		Tutorials, handing in, etc.							
16		Assessment						3	13,2
17									
18									
Subtotal 2								3	13,2
Total 2 (Hours of class plus student homework hours between weeks 15-18)								16,2	
TOTAL (Total 1 + Total 2. Maximum 180 hours)								150	