Universidad Carlos III de Madrid
www.uc3m.es

COURSE: Air Navigation Systems		
DEGREE: Master in Aeronautical Engineering	YEAR: 1st	TERM: 1st

La asignatura tiene 29 sesiones que se distribuyen a lo largo de 14 semanas. Los laboratorios pueden situarse en cualquiera de ellas. Semanalmente el alumnos tendrá dos sesiones, excepto en un caso que serán tres

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	Introduction to the Course	X			NO	Reading corresponding notes chapters	1,6	3.2
1	2	Review ATS/Flight Planning, altimetry, anemometry, meteo etc	X			NO	Reading corresponding notes chapters Study and personal work about the lecture	1,6	
2	3	Review of ATM/CNS	X			NO	Reading corresponding notes chapters Study and personal work about the lecture	1,6	3.2
2	4	Aeronautical Charts + Routes	X			NO	Reading corresponding notes chapters Study and personal work about the lecture	1,6	
3	5	Conventional, RNAV, PBN;	X			NO	Reading corresponding notes chapters Study and personal work about the lecture	1,6	3.2

3	6	Performances, FMS+ Flight Planning	X			NO	Solve the proposed exercises/group work	1,6	
4	7	Intro Optimization I		X	X	YES	Solve the proposed exercises/group work	1,6	3.2
4	8	Linear Opt. Integer Opt, Non-linera Opt	X			NO	Reading corresponding notes chapters Study and personal work about the lecture	1,6	
5	9	Guidance, Navigation, and Control I	X			NO	Reading corresponding notes chapters Study and personal work about the lecture	1,6	3.2
5	10	Optimization Lab		X	X	YES	Solve the proposed exercises/group work	1,6	
6	11	Guidance, Navigation, and Control II	X			NO	Reading corresponding notes chapters Study and personal work about the lecture	1,6	3.2
6	12	ATFM modeling	X			NO	Reading corresponding notes chapters Study and personal work about the lecture	1,6	
7	13	ATFM Lab I		X	X	YES	Solve the proposed exercises/group work	1,6	3.2
7	14	ATFM Lab II		X	X	YES	Solve the proposed exercises/group work	1,6	
8	15	Guidance, Navigation, and Control III	X			NO	Solve the proposed exercises/group work	1,6	3.2
8	16	Trajectory Management In ATM	X			NO	Reading corresponding notes chapters Study and personal work about the lecture	1,6	
9	17	ATC + CD&R algoritms	X			NO	Reading corresponding notes chapters Study and personal work about the lecture	1,6	3.2
9	18	CD&R Lab I		X	X	YES	Solve the proposed exercises/group work	1,6	
10	19	Maneuvres, Procedures, and Aeronautcial Charts	X			NO	Reading corresponding notes chapters Study and personal work about the lecture	1,6	3.2
10	20	CD&R Lab II		X	X	YES	Solve the proposed exercises/group work	1,6	
11	21	Lab FS I		X	X	YES	Solve the proposed exercises/group work	1,6	3.2
11	22	Visit		X	X	NO	Prepare Midterm Exam	1,6	
12	23	Lab FS II		X	X	YES	Reading corresponding notes chapters Study and personal work about the lecture	1,6	3.2
12	24	Intro to Simulation		X	X	YES	Solve the proposed exercises/group work	1,6	
13	25	Simulation Exercise I		X	X	YES	Solve the proposed exercises/group work	1,6	3.2
13	26	Simulation Exercise II		X	X	YES	Solve the proposed exercises/group work	1,6	
14	27	Intro SESAR I		X		NO	Reading corresponding notes chapters Study and personal work about the lecture	1,6	3.2
14	28	Intro SESAR II		X		NO	Reading corresponding notes chapters Study and personal work about the lecture	1,6	
15	29	Review		X		NO	Study Final Exam	1,6	-

							Subtotal 1	**48,8**	**44,8**
							Total 1 *(Hours of class plus student homework hours between weeks 1-14)*		87,6
15		Tutorials, handing in, etc							5
16		Assessment						6	55
17									
18									
							Subtotal 2	**6**	**60**
							Total 2 *(Hours of class plus student homework hours between weeks 15-18)*		66

TOTAL *(Total 1 + Total 2. Maximum 180 hours)*	**147.6**