Universidad Carlos III de Madrid
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COURSE: Advanced Aircraft Design and Certification II		
MASTER: Aeronautical Engineering	**YEAR: 2nd**	**TERM: 1st**

La asignatura tiene 29 sesiones que se distribuyen a lo largo de 11 semanas. Los laboratorios pueden situarse en cualquiera de ellas.
The course has 29 sessions distributed along 11 weeks. Labs can be located in any of these weeks.

2020 calendar prevision

Month	Wk	Mon	Wed	Fri	Mon	Wed	Fri (or Thu)	Sessions
Sep			2	4				
Sep		7	9	11				
Sep	1	14	16	18	(1) Aircraft Sizing Review	(1) Aircraft Sizing Review	**Lab Practice 1**	1-2-**25**
Sep	2	21	23	25	(2) Longitudinal FQ and HTP	(2) Longitudinal FQ and HTP	(3) Lateral FQ and VTP	3-4-5
Sp/Oc	3	28	30	2	(3) Lateral FQ and VTP	(1)+(4) A/C Sizing + Pwp Instal.	**Lab Practice 2**	6-7-**26**
Oct	4	5	7	9	(4) Powerplant Installation	(4) Powerplant Installation	(5) Landing Gear Design	8-9-10
Oct	5	12	14	16		(5) Landing Gear Design	(6) Flight Loads	11-12
Oct	6	19	21	23	(6) Flight Loads	(6) Flight Loads	**Partial Exam**	13-14-**29**
Oc/Nv	7	26	28	30	(7) Ground Loads	(7) Ground Loads	**Lab Practice 3**	15-16-**27**
Nov	8	2	4	6		(8) Fatigue Analysis	(8) Fatigue Analysis	17-18
Nov	9	9	11	13	(9) Aircraft Mass & CG	(9) Aircraft Mass & CG	**Lab Practice 4**	19-20-**28**
Nov	10	16	18	20	(10) Interact Syst-Flight-Struc	(10) Interact Syst-Flight-Struc	(11) Introd. to Helicopters	21-22-23
Nov	11	23	25	27	(11) Introd. to Helicopters			24

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	Aircraft Sizing Review	X	X		NO	Reading corresponding notes chapters Study and personal work about the lecture Solve the proposed exercises	1.6	3.2
1	2	Aircraft Sizing Review	X	X		NO	Reading, study and solving exercises	1.6	3.2
2	3	Longitudinal Flying Qualities and HTP design	X	X		NO	Reading, study and solving exercises	1.6	3.2
2	4	Longitudinal Flying Qualities and HTP design	X	X		NO	Reading, study and solving exercises	1.6	3.2
2	5	Lateral Flying Qualities and VTP design	X	X		NO	Reading, study and solving exercises	1.6	3.2
3	6	Lateral Flying Qualities and VTP design	X	X		NO	Reading, study and solving exercises	1.6	3.2
3	7	A/C Sizing Review + Powerplant Installation	X	X		NO	Reading, study and solving exercises	1.6	3.2
4	8	Powerplant Installation	X	X		NO	Reading, study and solving exercises	1.6	3.2
4	9	Powerplant Installation	X	X		NO	Reading, study and solving exercises	1.6	3.2
4	10	Landing Gear Design	X	X		NO	Reading, study and solving exercises	1.6	3.2
5	11	Landing Gear Design	X	X		NO	Reading, study and solving exercises	1.6	3.2
5	12	Flight Loads	X	X		NO	Reading, study and solving exercises	1.6	3.2
6	13	Flight Loads	X	X		NO	Reading, study and solving exercises	1.6	3.2
6	14	Flight Loads	X	X		NO	Reading, study and solving exercises	1.6	3.2
7	15	Ground Loads	X	X		NO	Reading, study and solving exercises	1.6	3.2
7	16	Ground Loads	X	X		NO	Reading, study and solving exercises	1.6	3.2
8	17	Fatigue Analysis	X	X		NO	Reading, study and solving exercises	1.6	3.2
8	18	Fatigue Analysis	X	X		NO	Reading, study and solving exercises	1.6	3.2
9	19	Aircraft Mass and CG estimation	X	X		NO	Reading, study and solving exercises	1.6	3.2

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)
9	20	Aircraft Mass and CG estimation	X	X		NO	Reading, study and solving exercises	1.6	3.2
10	21	Interaction Systems-Flight-Structures	X	X		NO	Reading, study and solving exercises	1.6	3.2
10	22	Interaction Systems-Flight-Structures	X	X		NO	Reading, study and solving exercises	1.6	3.2
10	23	Introduction to Helicopters	X	X		NO	Reading, study and solving exercises	1.6	3.2
11	24	Introduction to Helicopters	X	X		NO	Reading, study and solving exercises	1.6	3.2
1	25	Lab Practice 1		X	X	YES	Computational practice	1.6	3.2
3	26	Lab Practice 2		X	X	YES	Computational practice	1.6	3.2
7	27	Lab Practice 3		X	X	YES	Computational practice	1.6	3.2
9	28	Lab Practice 4		X	X	YES	Computational practice	1.6	3.2
6	29	Partial Exam			X	YES	Exam	1.6	10
							Subtotal 1	**46.4**	**99.6**
		Total 1 *(Hours of class plus student homework hours between weeks 1-12)*						150	
11-12		Tutorials, handing in, etc							5
12-14		Final Assessment			X	YES		3	15
							Subtotal 2	**3**	**20**
		Total 2 *(Hours of class plus student homework hours between weeks 13-16)*						23	
TOTAL *(Total 1 + Total 2. Maximum 180 hours)*								**173**	