



<b>COURSE: AIRCRAFT SYSTEM</b>		
<b>DEGREE: AEROSPACE ENGINEERING</b>	<b>YEAR: 4th</b>	<b>TERM: 1st</b>

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	Subject introduction Basic hydraulics for aircraft systems design Head losses in ducts Piping networks		X		NO	Reading the corresponding book chapters Study and personal work Solve the proposed exercises	1,67	3
2	2	Hydraulic systems <ul style="list-style-type: none"> <li>• General design guidelines</li> <li>• Pumps</li> <li>• Valves</li> </ul>	X			NO	Reading the corresponding book chapters Study and personal work	1,67	3
3	3	LABORATORY #1 Design of a hydraulic system for actuation		X		NO	Reading the corresponding book chapters Study and personal work Solve the proposed lab problems	1,67	3
4	4	Flight control systems <ul style="list-style-type: none"> <li>• Flight control surfaces and actuation</li> </ul>	X			NO	Reading the corresponding book chapters Study and personal work	1,67	3

5	5	<p>Engine systems</p> <ul style="list-style-type: none"> <li>• The control problem</li> <li>• Design criteria</li> <li>• Engine starting</li> <li>• Reverse thrust</li> </ul>	X			NO	<p>Reading the corresponding book chapters</p> <p>Study and personal work</p>	1,67	3
6	6	<p>Fuel systems (1/2)</p> <ul style="list-style-type: none"> <li>• Fuel systems components</li> <li>• Fuel systems operating modes</li> <li>• Fuel level measurement systems</li> </ul>	X			NO	<p>Reading the corresponding book chapters</p> <p>Study and personal work</p>	1,67	3
7	7	<p>Fuel systems (2/2)</p> <ul style="list-style-type: none"> <li>• Pump selection for engine feeding</li> </ul> <p>Pneumatic systems</p> <ul style="list-style-type: none"> <li>• Engine bleed-air control</li> <li>• Use of bleed-air in aircraft systems</li> </ul>		X		NO	<p>Reading the corresponding book chapters</p> <p>Study and personal work</p> <p>Solve the proposed exercises</p>	1,67	5
8	8	<p>Environmental control systems</p> <ul style="list-style-type: none"> <li>• Humidity control</li> <li>• Temperature control</li> <li>• Cabin pressurization</li> </ul>	X			NO	<p>Reading the corresponding book chapters</p> <p>Study and personal work</p>	1,67	3
9	9	<p>LABORATORY #2</p> <p>Design of a basic pressurization system</p>		X		NO	<p>Reading the corresponding book chapters</p> <p>Study and personal work</p> <p>Solve the proposed lab problems</p>	1,67	3
10	10	<p>Landing systems (1/2)</p> <ul style="list-style-type: none"> <li>• Landing carriages configurations</li> <li>• Wheels</li> <li>• Braking system</li> <li>• Shock absorbers</li> <li>• Non-Conventional landing systems</li> </ul>	X			NO	<p>Reading the corresponding book chapters</p> <p>Study and personal work</p>	1,67	3
11	11	<p>Landing systems (2/2)</p> <ul style="list-style-type: none"> <li>• Basic design of a braking system</li> <li>• Dynamics of a shock absorber</li> </ul>		X		NO	<p>Study and personal work</p> <p>Solve the proposed exercises</p>	1,67	3
12	12	<p>QUIZ</p> <p>Weather Protection systems</p> <ul style="list-style-type: none"> <li>• Ice formation</li> <li>• Anti-icing and de-icing</li> <li>• Lightning protection</li> </ul>	X			NO	<p>Reading the corresponding book chapters</p> <p>Study and personal work</p>	1,67	5
13	13	<p>Exercises on Weather Protection System</p> <p>Emergency systems</p> <ul style="list-style-type: none"> <li>• Warning systems</li> <li>• Fire detection and suppression</li> </ul>	X			NO	<p>Reading the corresponding book chapters</p> <p>Study and personal work</p> <p>Solve the proposed exercises</p>	1,67	3

		<ul style="list-style-type: none"> <li>Emergency power sources, oxygen, etc.</li> <li>The auxiliary power unit</li> <li>Emergency landing</li> </ul> Electrical systems (1/2)							
14	14	<ul style="list-style-type: none"> <li>Power generation</li> <li>Power distribution</li> </ul> Electrical systems (2/2) <ul style="list-style-type: none"> <li>Electric motors</li> <li>Power storage</li> </ul>		X		NO	Reading the corresponding book chapters Study and personal work	1,67	3
<b>Subtotal 1</b>								<b>23.3</b>	<b>46</b>
<b>Total 1 (Hours of class plus student homework hours between weeks 1-14)</b>								<b>69.3</b>	

15		Tutorials, handing in, etc						5	
16		Assessment						3	10
17									
18									
<b>Subtotal 2</b>								<b>3</b>	<b>10</b>
<b>Total 2 (Hours of class plus student homework hours between weeks 15-18)</b>								<b>18</b>	

<b>TOTAL (Total 1 + Total 2. Maximum 180 hours)</b>								<b>87.3</b>	
---	--	--	--	--	--	--	--	-------------	--