



COURSE: PHYSICS II		
DEGREE: AEROSPATIAL ENGINEERING	year: 1st	SEMESTER: 2nd

WEEKLY PROGRAMMING

WEEK	SESSION	DESCRIPTION	GROUPS		GROUPS	Special room for session (computer classroom, audio-visual classroom... (*))	WEEKLY PROGRAMMING FOR STUDENT		
			LECTURES	SEMINAR			DESCRIPCIÓN	CLASS HOURS	HOMEWORK HOURS Maximum 7 H
1	1	T1. Introduction of thermodynamics Temperature. Thermodynamic variables and state. Work.	X				- Reading of the corresponding chapters in the proposed literature. - Study and personal work on the lecture	1,5	5
1	2	Review: vectors and vectorial magnitudes. Algebra and calculus with vectors. Differential operators.		X			- Solve the proposed exercises. - Participation in discussions and activities.	1,5	
2	3	T2. First Law of Thermodynamics Joule equivalent heat. First principle. Heat transfer.	X				- Reading of the corresponding chapters in the proposed literature. - Study and personal work on the lecture	1,5	5
2	4			X			- Solve the proposed exercises. - Participation in discussions and activities.	1,5	
3	5	T3. Second law of thermodynamics.	X				- Reading of the corresponding chapters in the proposed literature.	1,5	5

		Heat engines. Refrigerators and Heat pumps. Carnot cycles.					- Study and personal work on the lecture		
3	6			X			- Solve the proposed exercises. - Participation in discussions and activities.	1,5	
4	7	T4 Entropy.	X				- Reading of the corresponding chapters in the proposed literature. - Study and personal work on the lecture	1,5	5
4	8			X			- Solve the proposed exercises. - Participation in discussions and activities.	1,5	
5	9	T5. Electrostatics in vacuum (I) Coulomb's law. Superposition principle. Electric field.	X				- Reading of the corresponding chapters in the proposed literature. - Study and personal work on the lecture	1,5	5
5	10	- Test exam #1: Thermodynamics.		X			- Test exam - Solve the proposed exercises. - Participation in discussions and activities.	1,5	
6	11	T6. Electrostatics in vacuum (II) Electric potential.	X				- Reading of the corresponding chapters in the proposed literature. - Study and personal work on the lecture	1,5	5
6	12			X			- Solve the proposed exercises. - Participation in discussions and activities.	1,5	
7	13	T7. Electrostatics in vacuum (III) Gauss' law. Sources of the electric field.	X				- Reading of the corresponding chapters in the proposed literature. - Study and personal work on the lecture	1,5	5
7	14			X			- Solve the proposed exercises. - Participation in discussions and activities.	1,5	
8	15	T8. Conductors Propoerties of conductors. Capacitance. Electrostatic energy.	X				- Reading of the corresponding chapters in the proposed literature. - Study and personal work on the lecture	1,5	4

8	16			X			- Solve the proposed exercises. - Participation in discussions and activities.	1,5	
9	17	T9. Capacitors. Capacitors. Associations. Capacitance.	X				- Reading of the corresponding chapters in the proposed literature. - Study and personal work on the lecture	1,5	5
9	18			X			- Solve the proposed exercises. - Participation in discussions and activities.	1,5	
10	19	T10. Electric current Electric current. Current densities. Joule effect.	X				- Reading of the corresponding chapters in the proposed literature. - Study and personal work on the lecture	1,5	5
10	20	- Test exam #2: Electrostatics, conductors, capacitors.		X			- Test exam. - Solve the proposed exercises. - Participation in discussions and activities.	1,5	
11	21	T11. Magnetostatics of vacuum (I) Biot-Savart Law	X				- Reading of the corresponding chapters in the proposed literature. - Study and personal work on the lecture	1,5	5
11	22			X			- Solve the proposed exercises. - Participation in discussions and activities.	1,5	
12	23	T12. Magnetostatics of vacuum (II) Sources of the magnetic field. Ampere's law. Magnetic flux	X				- Reading of the corresponding chapters in the proposed literature. - Study and personal work on the lecture	1,5	5
12	24			X			- Solve the proposed exercises. - Participation in discussions and activities.	1,5	
13	25	T13. Magnetic induction. Faraday's law. Lenz's law. Magnetic circuits..	X				- Reading of the corresponding chapters in the proposed literature. - Study and personal work on the lecture	1,5	5

13	26			X			- Solve the proposed exercises. - Participation in discussions and activities.	1,5	
14	27	T14. Magnetic Materials. Diamagnetism. Paramagnetism. Ferromagnetism.	X				- Reading of the corresponding chapters in the proposed literature. - Study and personal work on the lecture	1,5	5
14	28	- Test exam #3: Magnetostatics, Electric Current, Magnetic Induction.		X			- Test exam - Solve the proposed exercises. - Participation in discussions and activities.	1,5	
SUBTOTAL								42	+ 68 = 110
15		Tutorials						2	2
16-18		Assessment						3	15
TOTAL								132	

(*) Dates of the test exams are provisional.

LABORATORY SESSIONS						
SESSION	WEEK	DESCRIPTION	ROOM	WEEKLY PROGRAMMING FOR STUDENT		
				DESCRIPTION	CLASS HOURS	HOMEWORK HOURS Maximum 7 H
1		Thermodynamics	4.SB01-4.SB02-4.SB03	- Reading of the guideline document. - Data acquisition - Analysis of results - Preparation of the report	1,5	3
2		Electric and magnetic phenomena	4.SB01-4.SB02-4.SB03	- Reading of the guideline document. - Data acquisition - Analysis of results - Preparation of the report	1,5	3
3		Electric and magnetic phenomena	4.SB01-4.SB02-4.SB03	- Reading of the guideline document. - Data acquisition - Analysis of results - Preparation of the report	1,5	3
4		Electric and magnetic phenomena	4.SB01-4.SB02-4.SB03	- Reading of the guideline document. - Data acquisition - Analysis of results - Preparation of the report	1,5	3
TOTAL					18	