



UNIVERSITAT
POLITÈCNICA
DE VALÈNCIA

2351-MÁSTER UNIVERSITARIO EN SPACE ENGINEERING

PLAN DE ESTUDIOS



ETSI Aeroespacial y Diseño Industrial

Obligatorios	60 ECTS
Optativos	18 ECTS
TFM	12 ECTS
Total	90 ECTS

Escuela Técnica Superior de Ingeniería
Aeroespacial y Diseño Industrial
Universidad Politécnica de Valencia
Comino de Vera s/n 46022 Valencia
www.etsiadi.upv.es

MÓDULO	MATERIA	CÓDIGO	ASIGNATURA	CR
Hardware (24 ECTS)	Materials	36367	Spacecraft materials	3
		36368	Spacecraft mechanical design	3
	Power systems	36369	Spacecraft power systems	3
		36370	Spacecraft thermal management	3
	Systems engineering	36373	Energy systems for space applications	3
		36372	Launch vehicles engineering and propulsion	4.5
36371		Spacecraft systems engineering	4.5	
Procedures (10.5 ECTS)	Mission, environment, and applications	36382	Mission operations and ground systems	3
		36383	Outer space environment	3
		36384	Satellite applications and navigation	4.5
Software & Data (25.5 ECTS)	Communications	36374	Satellite communications I	3
		36375	Satellite communications II	3
	Data acquisition and management	36379	Space electronic equipment	3
		36380	Space software architectures	4.5
		36381	Space software processes and certification	3
	Guidance, navigation, and control - GNC	36378	GNC of spacecraft	3
		36376	Orbital mechanics I	3
		36377	Orbital mechanics II	3
	Advanced (18 ECTS)	Complementary*	36385	Additive manufacturing
36388			Artificial intelligence applications in space	3
36390			Astrophysics	3
36389			High-altitude platform systems – HAPS	3
36391			Research fundamentals in the space sector I	3
36392			Research fundamentals in the space sector II	6
00000			Student exchange I	9
00000			Student exchange II	18
36386			Space propulsion	3
36387	Spacecraft trajectories optimization	3		
Master's final Project (12 ECTS)	Master's final Project	36393	Master's final project	12

(*) El alumnado podrá completar la Materia Complementary realizando PRÁCTICAS EN EMPRESA, hasta un máximo de 18 ECTS, a través de la Subdirección de Prácticas en Empresa de la ETSIADI. Las asignaturas de Student exchange I y II sólo podrán ser matriculadas a través de un acuerdo de MOVILIDAD, gestionado por RRII de la ETSIADI.

PRIMER CURSO (60 ECTS)

CÓDIGO	ASIGNATURA	TIPO	Sem.	CT	CP	ECTS
36367	Spacecraft materials	OB	A	1.75	1.25	3
36368	Spacecraft mechanical design	OB	A	1.75	1.25	3
36369	Spacecraft power systems	OB	A	2	1	3
36382	Mission operations and ground systems	OB	A	2.25	0.75	3
36383	Outer space environment	OB	A	1.25	1.75	3
36374	Satellite communications I	OB	A	1.5	1.5	3
36375	Satellite communications II	OB	A	1.5	1.5	3
36379	Space electronic equipment	OB	A	2	1	3
36376	Orbital mechanics I	OB	A	1.5	1.5	3
36377	Orbital mechanics II	OB	A	1.5	1.5	3
36370	Spacecraft thermal management	OB	B	1.25	1.75	3
36373	Energy systems for space applications	OB	B	1	2	3
36372	Launch vehicles engineering and propulsion	OB	B	2.25	2.25	4.5
36371	Spacecraft systems engineering	OB	B	2	2.5	4.5
36384	Satellite applications and navigation	OB	B	2	2.5	4.5
36380	Space software architectures	OB	B	2.5	2	4.5
36381	Space software processes and certification	OB	B	1.75	1.25	3
36378	GNC of spacecraft	OB	B	1.75	1.25	3

SEGUNDO CURSO - NO OFERTADAS CURSO 26/27

CÓDIGO	ASIGNATURA	TIPO	Sem.	CT	CP	ECTS
36385	Additive manufacturing	OP	A			3
36388	Artificial intelligence applications in space	OP	A			3
36390	Astrophysics	OP	A			3
36389	High-altitude platform systems – HAPS	OP	A			3
36391	Research fundamentals in the space sector I	OP	A			3
36392	Research fundamentals in the space sector II	OP	A			6
00000	Student exchange I	OP	A			9
00000	Student exchange II	OP	A			18
36386	Space propulsion	OP	A			3
36387	Spacecraft trajectories optimization	OP	A			3
36393	Master's final project	OB	A	--	12	12