

Course Unit Description - (DINAV)

(Advanced Dynamics)

(Mestrado em Engenharia Electrotécnica e de Computadores)

Academic year: 2009/2010



Subject group: Fluidos e Calor

	Semestral	Optional		
Mode of study	Diurno	Hours/Week	T-Teórica	2
Year	1 ^o		PL-Prática-Laboratorial	2
Semester	1 ^o		OT-Orientação Tutorial	1
ECTS				3

Objectives

This course intends to provide the theoretical background of mechanical knowledge for autonomous systems.

Course Contents

Distributed forces: centroids, centers of gravity and moments of inertia
Kinetics
Dynamics
Aerodynamics
Fluid mechanics

Recommended reading

Mecânica Vectorial para Engenheiros, Cinemática e Dinâmica, Beer and Johnston, Mc Graw Hill.
Dinâmica, Mecânica para Engenharia, R.C.Hibbeler. Prentice Hall.
Fundamentos de Aerodinâmica Incompressível. Vasco de Brederode. Ed. autor. 1997.
Mecânica dos fluidos. Frank M. White. Mc Graw Hill.

Teaching Methods

The course will be present in 5 topics. Teaching methods will be based in theoretical lessons and practical examples, research and exercises done in the classes.

Assessment methods

The final grade is composed by the assessment of following components:
Practical exercises resolution in classes, and one research work composed by a written report, an oral presentation and defense.

	Name
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Lecturer:	Fernando Jose Ferreira (FJF)