



Helicopters

Professor

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Web Page: See FENIX web page

Schedule

Horas/Dias	Segunda	Terça	Quarta	Quinta	Sexta	Sábado
8:00-8:30						
8:30-9:00						
9:00-9:30						
9:30-10:00						
10:00-10:30						
10:30-11:00						
11:00-11:30						
11:30-12:00						
12:00-12:30						
12:30-13:00			T <u>V0.02</u>	T <u>F3</u>		
13:00-13:30			Semanas: 1 - 14	Semanas: 1 - 14		
13:30-14:00						
14:00-14:30					PB <u>V1.12</u>	
14:30-15:00					Semanas: 1 - 14	
15:00-15:30						
15:30-16:00						
16:00-16:30			PB <u>V1.14</u>			
16:30-17:00			Semanas: 1 - 14			
17:00-17:30						
17:30-18:00						



Availability

Schedule:

Wednesday 14:00 till 16:00

Thursday 14:00 till 15:30

Professor office

Helicopters

Grade

- Two tests (each 50% of the final grade)
- Minimum grade 8.0/20

Grade higher than 17/20: Defence with an Oral Exam



Tests Schedule

- 1º Test: 11 de November 2013
- 2º Test: 1º date on the exams calendar
- 1º e 2º test: 2º date on the exams calendar

Helicópteros

- The student can have a formula printout with him during the tests. The authorized one is available on the web page.

Helicopters

Text Books

- J. Gordon Leishman “Principles of Helicopter Aerodynamics”, Cambridge Aerospace Series
- Wayne Johnson “Helicopter Theory”, Dover Publications
- Stepiewski & Keys “Rotary-Wing Aerodynamics” Dover Publications
- John Watkinson “The Art of the Helicopter” Elsevier

Helicopters

As old as the idea that a man could fly as a
bird

Is the idea that one could start flying vertically
(vertical take-off)

Helicopters

The importance of the helicopter

- The aeroplane generates lift moving its wings through the air. This movement is achieved with the aeroplane movement.
- If the wing could move through the air without the craft movement then it is possible to “hover” (no forward movement)

Helicopters

Course Structure

- Introduction
- Aerodynamics in hover flight
- Aerodynamics in ascending and descending flight
- Aerodynamics in forward flight
- Helicopter Performance
- Rotor Dynamics
- Helicopter design