



220305 - Rockets Combustion and Propulsion

Coordinating unit: 205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 724 - MMT - Department of Heat Engines
Academic year: 2018
Degree: MASTER'S DEGREE IN AERONAUTICAL ENGINEERING (Syllabus 2014). (Teaching unit Compulsory)
ECTS credits: 5 Teaching languages: Catalan, Spanish

Teaching staff

Coordinator: Manel Quera Miró
Others: Borja Borràs Quintanal
David Bermejo Plana

Learning objectives of the subject

A

Study load

Total learning time: 125h	Hours large group:	30h	24.00%
	Hours small group:	15h	12.00%
	Self study:	80h	64.00%

220305 - Rockets Combustion and Propulsion

Content

title english	Learning time: 5h 33m Theory classes: 1h 20m Laboratory classes: 0h 40m Self study : 3h 33m
Description: content english	
title english	Learning time: 5h 33m Theory classes: 1h 20m Laboratory classes: 0h 40m Self study : 3h 33m
Description: content english	
title english	Learning time: 11h 06m Theory classes: 2h 40m Laboratory classes: 1h 20m Self study : 7h 06m
Description: content english	
title english	Learning time: 11h 06m Theory classes: 2h 40m Laboratory classes: 1h 20m Self study : 7h 06m
Description: content english	

220305 - Rockets Combustion and Propulsion

title english	Learning time: 16h 40m Theory classes: 4h Laboratory classes: 2h Self study : 10h 40m
Description: content english	

title english	Learning time: 16h 40m Theory classes: 4h Laboratory classes: 2h Guided activities: 10h 40m
Description: content english	

title english	Learning time: 16h 40m Theory classes: 4h Laboratory classes: 2h Self study : 10h 40m
Description: content english	

title english	Learning time: 16h 40m Theory classes: 4h Laboratory classes: 2h Self study : 10h 40m
Description: content english	

220305 - Rockets Combustion and Propulsion

title english	Learning time: 13h 53m Theory classes: 3h 20m Laboratory classes: 1h 40m Self study : 8h 53m
Description: content english	
title english	Learning time: 11h 06m Theory classes: 2h 40m Laboratory classes: 1h 20m Self study : 7h 06m
Description: content english	

Bibliography

Basic:

Sutton, G. P.; Biblarz, O. Rocket propulsion elements. 8th ed. New York: John Wiley & Sons, 2010. ISBN 9780470080245.

Huzel, D. K.; Huang, D. H. Modern engineering for design of liquid-propellant rocket engines. Washington: American Institute of Aeronautics and Astronautics, 1992. ISBN 1563470136.

Brown, Charles D. Spacecraft propulsion. Washington, DC: American Institute of Aeronautics and Astronautics, 1995. ISBN 1563471280.

Huzel, D. K.; Huang, D. H. Design of liquid-propellant rocket engines [on line]. 2nd ed. Washington: National Aeronautics and Space Administration, 1971 [Consultation: 05/07/2016]. Available on: <<http://ntrs.nasa.gov/search.jsp?R=19710019929>>.

Mattingly, Jack D. Elements of propulsion: gas turbines and rockets [on line]. Reston: American Institute of Aeronautics and Astronautics, 2006 [Consultation: 05/07/2016]. Available on: <<http://site.ebrary.com/lib/upcatalunya/detail.action?docID=10516507>>. ISBN 1563477793.

Complementary:

Turchi, Peter J. Propulsion techniques: action and reaction. Reston: American Institute of Aeronautics and Astronautics, 1998. ISBN 1563471159.

Oates, Gordon C. Aerothermodynamics of gas turbine and rocket propulsion. 3rd ed. Reston: American Institute of Aeronautics and Astronautics, 1997. ISBN 1563472414.

Others resources: