

220018 - SP - Propulsion Systems

Coordinating unit: 205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering
 Teaching unit: 724 - MMT - Department of Heat Engines
 Academic year: 2019
 Degree: BACHELOR'S DEGREE IN AEROSPACE TECHNOLOGY ENGINEERING (Syllabus 2010). (Teaching unit Compulsory)
 BACHELOR'S DEGREE IN AEROSPACE VEHICLE ENGINEERING (Syllabus 2010). (Teaching unit Compulsory)
 ECTS credits: 4,5 Teaching languages: Catalan

Teaching staff

Coordinator: MANUEL QUERA MIRO
 Others: ANGEL COMAS AMENGUAL - DAVID BERMEJO PLANA - ALBERT PUIG KOWERDOWICZ

Degree competences to which the subject contributes

Specific:

1. GrETA/GrEVA - An adequate understanding of the following, as applied to engineering: concepts and laws that govern the processes of energy transfer, the movement of fluids, the mechanisms of heat transfer and phase transition, and their role in analysis of the main aerospace propulsion systems.

Teaching methodology

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Learning objectives of the subject

Study

Study load

Total learning time: 112h 30m	Hours large group:	31h	27.56%
	Hours medium group:	7h	6.22%
	Hours small group:	7h	6.22%
	Self study:	67h 30m	60.00%

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Content

<p>Item1:</p>	<p>Learning time: 2h 30m Theory classes: 1h Self study : 1h 30m</p>
<p>Description: P</p>	
<p>Item 2</p>	<p>Learning time: 27h 30m Theory classes: 7h 30m Practical classes: 3h 30m Self study : 16h 30m</p>
<p>Description: 2.1 2.2</p>	
<p>Item 3</p>	<p>Learning time: 27h 30m Theory classes: 7h 30m Practical classes: 3h 30m Self study : 16h 30m</p>
<p>Description: 3.1 Related activities: T</p>	
<p>Item 4</p>	<p>Learning time: 27h 30m Theory classes: 7h 30m Practical classes: 3h 30m Self study : 16h 30m</p>
<p>Description: 4.1 Related activities: P</p>	

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Item 5	Learning time: 27h 30m Theory classes: 7h 30m Practical classes: 3h 30m Self study : 16h 30m
Description: 5.1 Related activities: P	

Qualification system

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Regulations for carrying out activities

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Bibliography

Basic:

Glassman, Irvin. Combustion [on line]. 4th ed. Sant Diego [etc.]: Academic Press, 2008 [Consultation: 02/07/2014]. Available on: <<http://www.sciencedirect.com/science/book/9780120885732>>. ISBN 9780120885732.

Çengel, Y. A.; Boles, M. A. Termodinámica [on line]. 7ª ed. México [etc.]: McGraw-Hill, 2009 [Consultation: 29/06/2016]. Available on: <<http://site.ebrary.com/lib/upcatalunya/docDetail.action?docID=10747893&p00=9781456213381>>. ISBN 9786071507433.

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

Mattingly, Jack D. Elements of propulsion: gas turbines and rockets. Reston: American Institute of Aeronautics and Astronautics, 2006. ISBN 1563477793.

Basshuysen, Richard Van; Schäfer, Fred. Internal combustion engine handbook: basics, components, systems and perspectives. Warrendale, PA: SAE International, 2004. ISBN 9780768011395.

Aircraft piston engines: for professional and private pilots. Oxford Aviation Training, 2005. ISBN 9781906202132.

Saravanamuttoo, H.I.H. [et al.]. Gas turbine theory. 6th ed. Harlow: New York: Pearson Prentice Hall, 2009. ISBN 9780132224376.

El-Sayed, Ahmed F. Aircraft propulsion and gas turbine engines. Boca Raton: CRC Press, 2008. ISBN 9780849391965.

Others resources: