

330517 - EME1 - Mechanical Engineering 1

Coordinating unit: 330 - EPSEM - Manresa School of Engineering
Teaching unit: 712 - EM - Department of Mechanical Engineering
Academic year: 2019
Degree: BACHELOR'S DEGREE IN AUTOMOTIVE ENGINEERING (Syllabus 2017). (Teaching unit Compulsory)
ECTS credits: 6 Teaching languages: Catalan, Spanish

Teaching staff

Coordinator: Al Omar Mesnaoui, Anas

Others: Alcelay Larión, José Ignacio
Peña Pitarch, Esteban
Ortuño Martín, Jose

Degree competences to which the subject contributes

Basic:

- CB3. That students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues.
- CB4. Students can transmit information, ideas, problems and solutions to a specialized and non-specialized audience.

Specific:

- CE11. Knowledge and application of the theory principles of machines, mechanisms and dynamics of the vehicle.

Generical:

- CG3. Knowledge in basic and technological subjects that will enable them to learn new methods and theories and give them the versatility to adapt to new situations.
- CG4. Ability to solve problems with initiative, decision-making, creativity, critical reasoning and to communicate and transmit knowledge, skills and skills in the field of automotive engineering.

Transversal:

1. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 2. Using strategies for preparing and giving oral presentations. Writing texts and documents whose content is coherent, well structured and free of spelling and grammatical errors.
2. TEAMWORK - Level 2. Contributing to the consolidation of a team by planning targets and working efficiently to favor communication, task assignment and cohesion.
3. SELF-DIRECTED LEARNING - Level 2: Completing set tasks based on the guidelines set by lecturers. Devoting the time needed to complete each task, including personal contributions and expanding on the recommended information sources.

Learning objectives of the subject

330517 - EME1 - Mechanical Engineering 1

Study load

Total learning time: 150h	Hours large group:	45h	30.00%
	Hours medium group:	0h	0.00%
	Hours small group:	15h	10.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

330517 - EME1 - Mechanical Engineering 1

Content

<p>title english</p>	<p>Learning time: 14h Theory classes: 7h Self study : 7h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 8h Theory classes: 4h Self study : 4h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 10h Theory classes: 5h Self study : 5h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 12h Theory classes: 6h Self study : 6h</p>
<p>Description: content english</p>	
<p>title english</p>	<p>Learning time: 18h Theory classes: 8h Self study : 10h</p>
<p>Description: content english</p>	



330517 - EME1 - Mechanical Engineering 1

title english	Learning time: 18h Theory classes: 8h Self study : 10h
Description: content english	

330517 - EME1 - Mechanical Engineering 1

Planning of activities

name english	Hours: 4h Laboratory classes: 2h Self study: 2h
name english	Hours: 4h Laboratory classes: 2h Self study: 2h
name english	Hours: 4h Laboratory classes: 2h Self study: 2h
name english	Hours: 6h Laboratory classes: 3h Self study: 3h
name english	Hours: 6h Laboratory classes: 3h Self study: 3h
name english	Hours: 6h Laboratory classes: 3h Self study: 3h
name english	Hours: 2h Self study: 2h
name english	Hours: 2h Self study: 2h
name english	Hours: 2h Self study: 2h



330517 - EME1 - Mechanical Engineering 1

name english	Hours: 2h Self study: 2h
name english	Hours: 2h Self study: 2h
name english	Hours: 2h Self study: 2h
name english	Hours: 8h Theory classes: 2h Self study: 6h
name english	Hours: 8h Theory classes: 2h Self study: 6h
name english	Hours: 12h Theory classes: 3h Self study: 9h

330517 - EME1 - Mechanical Engineering 1

Bibliography

Basic:

Beer, Ferdinand P., i altres. Mecánica vectorial para ingenieros. Vol. 1, Estática [on line]. 11ª ed. México: McGraw-Hill Education, 2017 [Consultation: 18/06/2019]. Available on:
<https://discovery.upc.edu/iii/encore/record/C__Rb1516244?lang=cat>. ISBN 9781456255275.

Beer, Ferdinand P., i altres. Mecánica vectorial para ingenieros. Vol. 2, Dinámica [on line]. 11ª ed. México: McGraw-Hill Education, 2017 [Consultation: 18/06/2019]. Available on:
<https://discovery.upc.edu/iii/encore/record/C__Rb1516244?lang=cat>. ISBN 9781456255268.

Meriam, J. L.; Kraige, L. G. Mecánica para ingenieros. Vol. 1, Estática. 3ª ed. Barcelona: Reverté, 1998. ISBN 8429142576.

Meriam, J. L.; Kraige, L. G. Mecánica para ingenieros. Vol. 2, Dinámica. 3ª ed. Barcelona: Reverté, 1998. ISBN 8429142592.

Shigley, J. E. Teoría de máquinas y mecanismos. México: McGraw-Hill, 1982. ISBN 968451297X.

Norton, Robert L. Diseño de maquinaria: síntesis y análisis de máquinas y mecanismos. 4ª ed. México: McGraw-Hill, 2008. ISBN 9789701068847.

Complementary:

Bedford, A.; Fowler, W. T. Mecánica para ingeniería. Vol. 1, Estática. 5ª ed. México: Pearson Educación, 2008. ISBN 9789702612155.

Bedford, A.; Fowler, W. T. Mecánica para ingeniería. Vol. 2, Dinámica. 5ª ed. México: Pearson Educación, 2008. ISBN 9789702612780.

Riley, William F.; Sturges, Leroy D. Ingeniería mecánica. Vol. 1, Estática. Barcelona: Reverté, 1995. ISBN 842914255X.

Riley, William F.; Sturges, Leroy D. Ingeniería mecánica. Vol. 2, Dinámica. Barcelona: Reverté, 1995. ISBN 8429142568.

Hibbeler, R. C. Ingeniería mecánica: estática. 12ª ed. México: Prentice Hall, 2010. ISBN 9786074426618.

Hibbeler, R. C. Ingeniería mecánica: dinámica. 12ª ed. México: Prentice Hall, 2010. ISBN 9786074425604.