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220282 - Heat Engines Technology

Coordinating unit: 205 - ESEIAAT - Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 724 - MMT - Department of Heat Engines
Academic year: 2019
Degree: MASTER'S DEGREE IN INDUSTRIAL ENGINEERING (Syllabus 2013). (Teaching unit Optional)
ECTS credits: 7,5 Teaching languages: Catalan

Teaching staff

Coordinator: Yolanda Calventus Solé

Others: Àngel Comas Amengual - Joaquim Rigola Serrano
Oliet Casasayas, Carles

Degree competences to which the subject contributes

Specific:

1. Knowledge and ability to analyze the processes of heat transfer that allows the design and calculation of equipment and thermal applications.
2. Knowledge and capability to design and calculate equipment and refrigeration facilities (refrigeration and air conditioning).
3. Knowledge and ability to analyze, design, calculation and application of power cycles and alternative heat engines.

Learning objectives of the subject

a

Study load

Total learning time: 187h 30m	Hours large group:	45h	24.00%
	Hours small group:	22h 30m	12.00%
	Self study:	120h	64.00%

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Content

(ENG) Contingut 1: Tipus de motors i definició de paràmetres i variables de disseny i operació	Learning time: 18h Theory classes: 4h Laboratory classes: 2h Self study : 12h
(ENG) Contingut 2: Cinemàtica i dinàmica del motor	Learning time: 12h Theory classes: 4h Self study : 8h
(ENG) Contingut 3 : Arquitectura del motor	Learning time: 19h Theory classes: 3h Laboratory classes: 4h Self study : 12h
(ENG) Contingut 4: Determinació de magnituds indicades i efectives	Learning time: 12h Theory classes: 4h Self study : 8h
(ENG) Contingut 5: Model·lització de l'evolució seguida per el fluid motor	Learning time: 32h 45m Theory classes: 7h 30m Laboratory classes: 5h 15m Self study : 20h

Description:
a

Related activities:
a

Specific objectives:
a

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(ENG) Contingut 6: Heat exchangers

Learning time: 31h 15m

Theory classes: 6h
Laboratory classes: 5h 15m
Self study : 20h

Description:
a

Related activities:
a

Specific objectives:
a

(ENG) Contingut 7:

Learning time: 22h 30m

Theory classes: 4h 30m
Laboratory classes: 3h
Self study : 15h

Description:
a

Related activities:
a

Specific objectives:
a

(ENG) Contingut 8:

Learning time: 9h

Theory classes: 4h
Self study : 5h

Description:
a

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title english	Learning time: 9h Theory classes: 4h Self study : 5h

Description:
content english

Related activities:
Theory and practice classes

Specific objectives:
a

title english	Learning time: 22h Theory classes: 4h Laboratory classes: 3h Self study : 15h

Description:
a

Related activities:
a

Specific objectives:
a

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Planning of activities

(ENG) ACTIVITAT 1: CLASSES DE TEORIA	Hours: 136h Theory classes: 41h Self study: 95h

(ENG) ACTIVITAT 2:CLASSES DE PRÀCTIQUES	Hours: 47h 30m Laboratory classes: 22h 30m Self study: 25h

(ENG) ACTIVITAT 3: EXAMEN 1R PARCIAL	Hours: 2h Theory classes: 2h

(ENG) ACTIVITAT 4: EXAMEN 2N PARCIAL	Hours: 2h Theory classes: 2h

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Bibliography

Basic:

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