Universidad Zaragoza

Academic Year/course: 2021/22

28960 - Building installations

Syllabus Information

Academic Year: 2021/22
Subject: 28960 - Building installations
Faculty / School: 201 - Escuela Politécnica Superior
Degree: 583 - Degree in Rural and Agri-Food Engineering
ECTS: 5.0
Year: 4
Semester: Second semester
Subject Type: Optional
Module:

1. General information

2. Learning goals

3. Assessment (1st and 2nd call)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such a: Theoretical sessions, Problem-based learning, a Project based learning and Computer lab sessions.

4.2. Learning tasks

The course includes the following activities:

- Theoretical sessions (2,5 ECTS):
  - The teacher explains the theoretical content of each session. One of the objectives of this activity will be the promoting of the participation of the students and cooperative learning.
  - Problem-solving sessions. The teacher will resolve specific problems.
- Practical sessions (2,5 ECTS):
  - Problem-based learning. Students, working individually or in groups, gain knowledge and skills by working to respond to problems and questions.
  - Computer lab sessions. Students use technical software.
  - Project-based learning. Students gain knowledge and skills by working with examples of real projects.

In relation to the Sustainable Development Goals (SDG) and in particular targets 6.3 and 6.4, the problem-solving and case-based learning activities include these targets in the case of the activities focused on sizing and conditioning of water supply and disposal networks.

4.3. Syllabus

The course will address the following topics:

Theory Program

Section 1. Coldwater supply and distribution

1. Basic regulation.
2. Components of the installation.
3. Calculating the installation.

Section 2. Domestic hot water production and distribution

1. Basic regulation.
2. Components of the installation.
3. Calculating the installation.

Section 3. Water evacuation

1. Basic regulation.
2. Components of the installation.
3. Calculating the installation.

Section 4. Fire protection installation

1. Basic regulation.
2. Components of the installation.
3. Calculating the installation.

Section 5. Emergency electrical installations

1. Basic regulation.
2. Components of the installation.
3. Calculating the installation.

Practical program

1. Calculating a water supply installation for a building in the agricultural and/or food processing domain.
2. Calculating a water evacuation installation for a building in the agricultural and/or food processing domain.
3. Calculating the fire protection installations for a building in the agricultural and/or food processing domain.
4. Calculating the emergency lighting installation for a building in the agricultural and/or food processing domain.

4.4. Course planning and calendar

Week	Theoretical sessions (h)	Practical sessions (h)	Individual work (h)	Total (h)
1	1	0	1,5	2,5
2	2	2	6	10
3	2	2	6	10
4	2	2	6	10
5	2	2	6	10
6	2	2	6	10
7	2	2	6	10
8	2	2	6	10
9	2	2	6	10
10	2	2	6	10
11				
12	2	2	6	10
13	2	2	6	10
14	2	2	6	10
15	0	1	1,5	2,5

Total hours	25	25	75	125

4.5. Bibliography and recommended resources

BB España. Ministerio de Industria, Comercio y Turismo. Reglamento de Seguridad Contra Incendios en los Establecimientos Industriales RSCIEI (Real Decreto 2267/2004, de 3 de diciembre) y Guía Técnica de Aplicación (octubre 2007) / [Ministerio de Industria, Comercio y Turismo]. Madrid : Paraninfo, D.L. 2008

BB España. Ministerio de la Vivienda. Código técnico de la edificación. Edición septiembre 2009. Madrid : La Ley, 2009

BC Arizmendi Barnes, Luis Jesús. Cálculo y normativa básica de las instalaciones en los edificios. Tomo 1, Instalaciones hidráulicas, gases combustibles y de ventilación / Luis Jesús Arizmendi. 7ª ed. renovada. Pamplona : EUNSA, 2005

BC Arizmendi Barnes, Luis Jesús. Cálculo y normativa básica de las instalaciones en los edificios. Tomo 2, Instalaciones energéticas / Luis Jesús Arizmendi. 6ª. ed. renovada. Pamplona : EUNSA, 2003

BC España. Dirección General de la Vivienda, la Arquitectura y el Urbanismo. Normas tecnológicas de la edificación NTE. Instalaciones : diseño, cálculo, construcción, control, valoración, mantenimiento / Dirección General de la Vivienda, la Arquitectura y el Urbanismo. [14ª reimpr.]. Madrid : Ministerio de Fomento, Centro de Publicaciones, 2000

BC Martín Sánchez, Franco. Nuevo manual de instalaciones de fontanería y saneamiento : (Adaptado al Código Técnico de la Edificación) / Franco Martín Sánchez. 3ª ed. Madrid : A. Madrid Vicente, 2008

The updated recommended bibliography can be consulted in :
http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=28960&Identificador=C73803