

## [GBN101] HOSPITAL ENGINEERING

### GENERAL INFORMATION

<b>Studies</b>	DEGREE IN BIOMEDICAL ENGINEERING		<b>Subject</b>	Healthcare Environments
<b>Semester</b>	2	<b>Course</b>	3	<b>Mention / Field of specialisation</b>
<b>Character</b>	COMPULSORY		<b>Language</b>	EUSKARA
<b>Plan</b>	2017	<b>Modality</b>	Adapted Face-to-face	<b>Total hours</b>
<b>Credits</b>	4,5	<b>Hours/week</b>	3.89	70 class hours + 42.5 non-class hours = <b>112.5 total hours</b>

### PROFESSORS

SOTO RUIZ DE GORDOA, MIRIAM

### REQUIRED PREVIOUS KNOWLEDGE

Subjects	Knowledge
(No specific previous subjects required)	(No previous knowledge required)

### SKILLS

#### VERIFICA SKILLS

##### SPECIFIC

**GBCE28** - To manage hospital facilities taking into account aspects such as safety, communications, efficiency, etc. and identifying methods and tools to be used for continuous improvement

##### GENERAL

**GBCG10** - To be familiar with and apply the relevant laws and regulations concerning the professional activity of Biomedical Engineering.

**GBCG7** - To be able to analyse and assess the social and environmental impact of technical solutions.

**GBCG8** - Ability to apply quality principles and techniques.

**GBCG9** - Possessing organisation and planning skills within the environment of the company and other institutions and organisations.

##### CROSS

**GBCTR2** - To be able to do their job in cooperative, participatory environments, with awareness of social responsibility.

##### BASIC

**G\_CB2** - To be able to apply knowledge to occupational or professional tasks; have the necessary skills to pose and defend arguments, and to solve problems within their field of study

**G\_CB3** - To be capable of gathering and interpreting relevant data (normally within their field of study) in order to make judgements, reflecting on relevant matters of a social, scientific or ethical nature

### LEARNING RESULTS

**RG301** Assumes responsibilities in the work team, organizing and planning the tasks to be developed, facing the contingencies and encouraging the participation of its members.

#### LEARNING ACTIVITIES

Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams

CH

3 h.

NCH

2 h.

TH

5 h.

#### EVALUATION SYSTEM

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems

W

100%

#### MAKE-UP MECHANISMS

(No mechanisms)

**CH - Class hours:** 3 h.

**NCH - Non-class hours:** 2 h.

**TH - Total hours:** 5 h.

**RG302** Analyze the intervening variables in the problem and propose actions for a stable situation.

#### LEARNING ACTIVITIES

Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams

CH

3 h.

NCH

2 h.

TH

5 h.

EVALUATION SYSTEM	W	MAKE-UP MECHANISMS
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%	(No mechanisms)
<b>CH - Class hours:</b> 3 h. <b>NCH - Non-class hours:</b> 2 h. <b>TH - Total hours:</b> 5 h.		

**RG304** Define the problem, develop the solution and present the conclusions in a efficient manner, arguing and justifying each one of them in writing.

LEARNING ACTIVITIES	CH	NCH	TH
Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams	2,5 h.	1,5 h.	4 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISMS	
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%	(No mechanisms)	
<b>CH - Class hours:</b> 2,5 h. <b>NCH - Non-class hours:</b> 1,5 h. <b>TH - Total hours:</b> 4 h.			

**RG305** Define the problem, develop the solution and present the conclusions in a efficient manner, arguing and justifying each one of them in spoken form.

LEARNING ACTIVITIES	CH	NCH	TH
Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams	2,5 h.	1,5 h.	4 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISMS	
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	100%	(No mechanisms)	
<b>CH - Class hours:</b> 2,5 h. <b>NCH - Non-class hours:</b> 1,5 h. <b>TH - Total hours:</b> 4 h.			

**RGB318** [!] *Conoce y comprende las infraestructuras sanitarias, así como los servicios y unidades del hospital*

LEARNING ACTIVITIES	CH	NCH	TH
Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning	15 h.	10 h.	25 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	20 h.	11,25 h.	31,25 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISMS	
Individual written and/or oral tests or individual coding/programming tests	100%	(No mechanisms)	

**CH - Class hours:** 35 h.
   
**NCH - Non-class hours:** 21,25 h.
   
**TH - Total hours:** 56,25 h.

**RGB319** [!] *Conoce y comprende diferentes los aspectos característicos de la instalaciones hospitalarias, como por ejemplo, comunicaciones, gestión de residuos, sostenibilidad, ...*

**LEARNING ACTIVITIES**

	<b>CH</b>	<b>NCH</b>	<b>TH</b>
Development and writing of records, reports, presentations, audiovisual material, etc. on projects/work experience/challenges/case studies/experimental investigations carried out individually and/or in teams	15 h.	14,25 h.	29,25 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	9 h.		9 h.

**EVALUATION SYSTEM**

**W**

**MAKE-UP MECHANISMS**

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	40%	<i>(No mechanisms)</i>	
Individual written and/or oral tests or individual coding/programming tests	60%		

**CH - Class hours:** 24 h.
   
**NCH - Non-class hours:** 14,25 h.
   
**TH - Total hours:** 38,25 h.

**CONTENTS**

1. Health Policy and Organization of Health Systems
  - National Health System and Osakidetza
  - Basic Health Areas - Integrated Healthcare Organizations (IHO)
    - Primary care: function, roles and organization
    - Hospital Care: services and hospital units
2. Hospital Infrastructures
3. Quality Management
4. Hospital Waste Management
5. Economic sustainability of health systems
6. Continuous improvement of healthcare processes (DMAIC)

**LEARNING RESOURCES AND BIBLIOGRAPHY**

**Learning resources**

Subject notes
   
 Presentations by external Lecturers
   
 Moodle Platform
   
 Class presentations

**Bibliography**

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