

## [GBN202] INFORMATION SYSTEMS IN HEALTHCARE

### GENERAL INFORMATION

<b>Studies</b>	DEGREE IN BIOMEDICAL ENGINEERING		<b>Subject</b>	?
<b>Semester</b>	2	<b>Course</b>	3	<b>Mention / Field of specialisation</b>
<b>Character</b>	COMPULSORY		<b>Language</b>	ENGLISH
<b>Plan</b>	2022	<b>Modality</b>	Face-to-face	<b>Total hours</b>
<b>Credits</b>	4,5	<b>Hours/week</b>	3,68	66.3 class hours + 46.2 non-class hours = <b>112.5 total hours</b>

### 2030 AGENDA GOALS



### PROFESSORS

CUENCA ARIZA, JAVIER  
 DE ITURRATE REYZABAL, MIKEL

### REQUIRED PREVIOUS KNOWLEDGE

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

### LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
<b>GBR308</b> - To select information systems tools to provide solutions to the IT needs of hospital environments		x		3,78
<b>G-RTR1</b> - To develop interdisciplinary projects specific to their specialty and of gradual complexity, - becoming aware of respect for human rights and fundamental rights, and analyzing and assessing the impact of the proposed solutions on the SDGs - to acquire and/or apply basic, advanced and/or avant-garde, demonstrating the ability to work in multidisciplinary teams and/or undertake further studies with a high degree of autonomy		x		0,4
<b>G-RTR2</b> - To express information, ideas and the arguments that support them in an orderly, clear and coherent manner, orally and in writing, based on quality information, self-made or obtained from different sources, using inclusive and non-discriminatory language		x		0,32
<b>Total:</b>				<b>4,5</b>

KC: Knowledge or Content / SK: Skills / AB: Abilities

### SECONDARY LEARNING RESULTS

#### 2RGB393 (2 sem)

#### 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	NCH	TH
2,5 h.	1,5 h.	4 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

Observation (technical capacity, attitude and participation)

**CH - Class hours:** 2,5 h.

**NCH - Non-class hours:** 1,5 h.

**TH - Total hours:** 4 h.

#### 2RGB391 (2 sem)

#### 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	NCH	TH
1,9 h.	1,1 h.	3 h.

#### EVALUATION SYSTEM

W

#### MAKE-UP MECHANISMS

Self-assessment	25%	Observation (technical capacity, attitude and participation)
Co-assessment	25%	
Observation (technical capacity, attitude and participation)	50%	

**CH - Class hours:** 1,9 h.

**NCH - Non-class hours:** 1,1 h.

**TH - Total hours:** 3 h.

**RGB320** [!] *Conoce y aplica herramientas de estructuración e interoperabilidad de datos para su gestión*

**LEARNING ACTIVITIES**

	<i>CH</i>	<i>NCH</i>	<i>TH</i>
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	10 h.	4 h.	14 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	12 h.	10,25 h.	22,25 h.

**Comments:** The methodology of the course is as follows: 1. Lectures (4 hours per week). 2. Practical exercises to practice both in and out of class time. 3. Use of Mudle for content management and communications.

**EVALUATION SYSTEM**

	<i>W</i>
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	40%
Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems	20%
Individual written and/or oral tests or individual coding/programming tests	40%

**Comments:** The evaluation system consists of: 1. A control point (40% of the grade). 2. A group practical to be carried out during the semester (20% of the mark). 3. Completion of the POPBL for the semester (40% of the mark).

**MAKE-UP MECHANISMS**

Individual written and/or oral tests or individual coding/programming tests  
**Comments:** There will be a checkpoint to make up that part of the exam.

**CH - Class hours:** 22 h.

**NCH - Non-class hours:** 14,25 h.

**TH - Total hours:** 36,25 h.

**RGB319** [!] *Conoce y comprende la informatización del sistema hospitalario*

**LEARNING ACTIVITIES**

	<i>CH</i>	<i>NCH</i>	<i>TH</i>
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	10 h.	14 h.	24 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	18 h.	8,25 h.	26,25 h.
Carrying out visits and/or learning trips to other university centres, laboratories, companies and/or thermal power plants	5 h.	3 h.	8 h.

**EVALUATION SYSTEM**

	<i>W</i>
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	20%
Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems	40%
Individual written and/or oral tests or individual coding/programming tests	40%

**MAKE-UP MECHANISMS**

Individual written and/or oral tests or individual coding/programming tests

**CH - Class hours:** 33 h.

**NCH - Non-class hours:** 25,25 h.  
**TH - Total hours:** 58,25 h.

**2RGB392 (2 sem)**

**LEARNING ACTIVITIES**

	<i>CH</i>	<i>NCH</i>	<i>TH</i>
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	1,9 h.	1,1 h.	3 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**

Observation (technical capacity, attitude and participation)

**CH - Class hours:** 1,9 h.  
**NCH - Non-class hours:** 1,1 h.  
**TH - Total hours:** 3 h.

**2RGB390 (2 sem)**

**LEARNING ACTIVITIES**

	<i>CH</i>	<i>NCH</i>	<i>TH</i>
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	2,5 h.	1,5 h.	4 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**

Observation (technical capacity, attitude and participation)

**CH - Class hours:** 2,5 h.  
**NCH - Non-class hours:** 1,5 h.  
**TH - Total hours:** 4 h.

**2RGB394 (2 sem)**

**LEARNING ACTIVITIES**

	<i>CH</i>	<i>NCH</i>	<i>TH</i>
Carrying out/resolving projects/challenges/cases, etc. to provide solutions to problems in interdisciplinary contexts, real and/or simulated, individually and/or in teams	2,5 h.	1,5 h.	4 h.

**EVALUATION SYSTEM**

Presentation and defence of exercises, case studies, computer practical work, simulation practical work, laboratory practical work, term projects, end of degree project, master's thesis, challenges and problems

*W*

100%

**MAKE-UP MECHANISMS**

Observation (technical capacity, attitude and participation)

**CH - Class hours:** 2,5 h.  
**NCH - Non-class hours:** 1,5 h.  
**TH - Total hours:** 4 h.

**CONTENTS**

[!]

1. *Sistemas de Información Hospitalarios*

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-Mapa actual de los SI Hospitalarios un Hospital y toda la órbita de instituciones, agentes, proveedores, &hellip;.-Proyectos de SIH-Procesos de selección de soluciones de SIH

## 2. Interoperabilidad de los SIH

- Lenguajes de representación de datos (XML, DTD, XML schema, XSLT)- Lenguajes de visualización de datos (HTML, CSS).

### LEARNING RESOURCES AND BIBLIOGRAPHY

#### Learning resources

- [!] *Apuntes de la asignatura*
- [!] *Plataforma Moodle*

#### Bibliography

DUROCHER, David. HTML & CSS QuickStart Guide: The Simplified Beginners Guide to Developing a Strong Coding Foundation, Building Responsive Websites, and Mastering the Fundamentals of Modern Web Design. ClydeBank Media LLC, 2021.

RAY, Erik T. Learning XML: creating self-describing data. " O'Reilly Media, Inc.", 2003.

Health care information systems: a practical approach for health care management. 4th ed Karen, A. Wager, 2017. ISBN: 978-1-119-33718-8