

## [GBM103] INDUSTRIAL DESIGN OF NEW PRODUCTS

### GENERAL INFORMATION

<b>Studies</b>	DEGREE IN BIOMEDICAL ENGINEERING	<b>Subject</b>	New Products Engineering
<b>Semester</b>	1	<b>Course</b>	3
<b>Character</b>	OPTIONAL	<b>Mention / Field of specialisation</b>	
<b>Plan</b>	2017	<b>Modality</b>	Adapted Face-to-face
<b>Credits</b>	4,5	<b>Hours/week</b>	3.72
		<b>Language</b>	ENGLISH
		<b>Total hours</b>	67 class hours + 45.5 non-class hours = <b>112.5 total hours</b>

### PROFESSORS

VAL JAUREGUI, ESTER

### REQUIRED PREVIOUS KNOWLEDGE

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

### SKILLS

#### VERIFICA SKILLS

##### SPECIFIC

GBCE22 - To analyse and design medical equipment user-centered

##### GENERAL

GBCG4 - To take the initiative in problem solving, decision making and creativity, and to communicate and share knowledge and skills, understanding the ethical and professional responsibilities of the business activity in the field of Biomedical Engineering.

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

##### CROSS

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

##### BASIC

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

G\_CB5 - To have developed learning abilities required to embark on subsequent studies with a high level of autonomy.

### 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

	CH	NCH	TH
Development, writing and presentation of memorandums, reports, audiovisual material, etc. Relating to projects/POPBLs carried out individually or in teams		5 h.	5 h.

#### EVALUATION SYSTEM

	W
Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence	100%

#### MAKE-UP MECHANISMS

(No mechanisms)

CH - Class hours: 0 h.

NCH - Non-class hours: 5 h.

TH - Total hours: 5 h.

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

#### LEARNING ACTIVITIES

	CH	NCH	TH
Development, writing and presentation of memorandums, reports, audiovisual material, etc. Relating to projects/POPBLs carried out individually or in teams		5 h.	5 h.

#### EVALUATION SYSTEM

	W
Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence	100%

#### MAKE-UP MECHANISMS

(No mechanisms)

**CH - Class hours:** 0 h.
   
**NCH - Non-class hours:** 5 h.
   
**TH - Total hours:** 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, writing and presentation of memorandums, reports, audiovisual material, etc. Relating to projects/POPBLs carried out individually or in teams		4 h.	4 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISMS	
Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence	100%	(No mechanisms)	

**CH - Class hours:** 0 h.
   
**NCH - Non-class hours:** 4 h.
   
**TH - Total hours:** 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, writing and presentation of memorandums, reports, audiovisual material, etc. Relating to projects/POPBLs carried out individually or in teams		4 h.	4 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISMS	
Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence	100%	(No mechanisms)	

**CH - Class hours:** 0 h.
   
**NCH - Non-class hours:** 4 h.
   
**TH - Total hours:** 4 h.

**RGB311** Understand and apply basic knowledge of industrial design methodology for new equipment design

LEARNING ACTIVITIES	CH	NCH	TH
Individual and team exercises	20 h.	8 h.	28 h.
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	14 h.	5,5 h.	19,5 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISMS	
Reports of solving exercises, case studies, computer practices, simulation practices and laboratory practices	60%	(No mechanisms)	
Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	40%		

**Comments:** The final grade of the learning result will be calculated by taking the weighted average of the different academic activities defined in it as long as the grade of all of them exceeds 4. Otherwise, the final grade of the learning result will be equal to the

Minimum grade of the academic activities defined in it.

**CH - Class hours:** 34 h.

**NCH - Non-class hours:** 13,5 h.

**TH - Total hours:** 47,5 h.

**RGB312 Understand and apply specific design tools centered in users for designing new solutions**

**LEARNING ACTIVITIES**

	<i>CH</i>	<i>NCH</i>	<i>TH</i>
Development, writing and presentation of memorandums, reports, audiovisual material, etc.	13 h.	6 h.	19 h.
Relating to projects/POPBLs carried out individually or in teams			
Individual and team exercises	20 h.	8 h.	28 h.

**EVALUATION SYSTEM**

*W*

Reports of solving exercises, case studies, computer practices, simulation practices and laboratory practices	60%
Technical skills, involvement in the project, finished work, obtained results, handed documentation, presentation and technical defence	40%

**MAKE-UP MECHANISMS**

Reports of solving exercises, case studies, computer practices, simulation practices and laboratory practices

**Comments:** The final grade of the learning result will be calculated by taking the weighted average of the different academic activities defined in it as long as the grade of all of them exceeds 4. Otherwise, the final grade of the learning result will be equal to the Minimum grade of the academic activities defined in it.

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

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

**TH - Total hours:** 47 h.

**CONTENTS**

1. Design process
2. Human-centred design methodology
3. Human-centred design tools

**LEARNING RESOURCES AND BIBLIOGRAPHY**

**Learning resources**

Moodle Platform  
 Class presentations  
 Subject notes

**Bibliography**

Brown T. (2009) Change by design. Harper Business  
 DBZ metodología