**Goi Eskola Politeknikoa | Mondragon Unibertsitatea**
Course: 2024 / 2025 - Course planning

Mondragon
Unibertsitatea
Goi Eskola
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Escuela Politécnica
Superior

# [GOH304] CREATIVITY TECHNIQUES

## GENERAL INFORMATION

| | | | |
|---|---|---|---|
| **Studies** | DEGREE IN INDUSTRIAL ORGANIZATION ENGINEERING | **Subject** | ? |
| **Semester** | 2 | **Course** 3 | |
| **Character** | COMPULSORY | **Mention / Field of specialisation** | |
| **Plan** | 2022 | **Modality** Face-to-face | |
| **Credits** | 4,5 | **Hours/week** 2.72 | **Language** EUSKARA/CASTELLANO/ENGLISH |
| | | | **Total hours** 49 class hours + 63.5 non-class hours = **112.5 total hours** |

## 2030 AGENDA GOALS

## PROFESSORS

DOK-RABANETE GONZALEZ, LIERNI

GONDRA CRESPO, SARA

## REQUIRED PREVIOUS KNOWLEDGE

| **Subjects** | **Knowledge** |
|---|---|
| *(No specific previous subjects required)* | *(No previous knowledge required)* |

## LEARNING RESULTS

| LEARNING RESULTS | KC | SK | AB | ECTS |
|---|---|---|---|---|
| **GOR310** - To apply the creative process to improve a product or service from a sustainable approach | x | | | 3,78 |
| **G-RTR1** - 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 |
| **G-RTR2** - 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 |
| | | | **Total:** | **4,5** |

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

| ENAEE LEARNING RESULTS | ECTS |
|---|---|
| **ENAE04** - Knowledge and understanding: To be aware of the multidisciplinary context of engineering. | 0,77 |
| **ENAE06** - Analysis in engineering: Ability to apply their knowledge and understanding in analysing product, process and method engineering. | 0,92 |
| **ENAE08** - Engineering projects: Ability to apply their knowledge in the development and completion of projects which meet specific requirements. | 0,29 |
| **ENAE09** - Engineering projects: Understanding of the different methods and ability to use them. | 0,29 |
| **ENAE10** - Research & innovation: Ability to perform bibliographic searches, to use databases and other sources of information. | 0,76 |
| **ENAE12** - Research & innovation: Technical and lab competences. | 0,21 |
| **ENAE14** - Practical application of engineering: Ability to combine theory and practice in order to solve engineering problems. | 0,2 |
| **ENAE15** - Practical application of engineering: Understanding of applicable methods and techniques and their limitations. | 0,2 |
| **ENAE17** - Transversal competences: To work effectively, both individually and in a team. | 0,29 |
| **ENAE18** - Transversal competences: To use different methods to communicate effectively with the engineering community and society in general. | 0,29 |
| **ENAE19** - Transversal competences: Demonstrate that they are aware of the responsibility implied in the practical application of engineering, the social and environmental impact, and show commitment with professional ethics, responsibility and regulations of the practical application of engineering. | 0,28 |
| **Total:** | **4,5** |

## SECONDARY LEARNING RESULTS

**RGO327** **[!]** *APLICA las técnicas y herramientas de creatividad adecuadas para conceptualizar o mejorar un producto o servicio*

| 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 | | 16 h. | 16 h. |

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individually and/or in teams

| Learning activity | CH | NCH | TH |
|---|---|---|---|
| Conducting tests, giving presentations, presenting defences, taking examinations and/or doing checkpoints | 4 h. | 4 h. | 8 h. |
| Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects | 10 h. | | 10 h. |
| Carrying out exercises and solving problems individually and/or in teams | 15 h. | 5,5 h. | 20,5 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 | 40% | Individual written and/or oral tests or individual coding/programming tests |
| 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 | 20% | |

**CH - Class hours:** 29 h.
**NCH - Non-class hours:** 25,5 h.
**TH - Total hours:** 54,5 h.

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## 2RGO391 (2 sem)

| 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 | | 3 h. | 3 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)* |

**CH - Class hours:** 0 h.
**NCH - Non-class hours:** 3 h.
**TH - Total hours:** 3 h.

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## RGO326 [!] *SELECCIONA la solución de mejora de un producto o servicio más apropiada para avanzar hacia la triple sostenibilidad.*

| 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 | | 6 h. | 6 h. |
| Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects | 5 h. | | 5 h. |
| Carrying out exercises and solving problems individually and/or in teams | 10 h. | 5 h. | 15 h. |
| Practical work in workshops and/or laboratories, individually and/or in teams | 5 h. | 5 h. | 10 h. |
| Tutoring sessions and monitoring of training activities | | 4 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 | 40% | Individual written and/or oral tests or individual coding/programming tests |
| 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% | |

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| Individual written and/or oral tests or individual coding/programming tests | 20% |
|---|---|

**CH - Class hours:** 20 h.
**NCH - Non-class hours:** 20 h.
**TH - Total hours:** 40 h.

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### 2RGO392 (2 sem)

| 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 | | | 3 h. | 3 h. |

| EVALUATION SYSTEM | W | MAKE-UP MECHANISMS |
|---|---|---|
| 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 | 50% | Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems |
| Individual written and/or oral tests or individual coding/programming tests | 50% | |

**CH - Class hours:** 0 h.
**NCH - Non-class hours:** 3 h.
**TH - Total hours:** 3 h.

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### 2RGO393 (2 sem)

| 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 | | | 4 h. | 4 h. |

| EVALUATION SYSTEM | W | MAKE-UP MECHANISMS |
|---|---|---|
| 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 | 100% | Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems |

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

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### 2RGO390 (2 sem)

| 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 | | | 4 h. | 4 h. |

| EVALUATION SYSTEM | W | MAKE-UP MECHANISMS |
|---|---|---|
| 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 | 100% | Individual written and/or oral tests or individual coding/programming tests |

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

### 2RGO394 (2 sem)

| 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 | | 4 h. | 4 h. |

| EVALUATION SYSTEM | W | MAKE-UP MECHANISMS |
|---|---|---|
| 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 | 100% | Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems |

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

## CONTENTS

1. Basic concepts of creativity2. Definition of creativity3. Creativity process1. Double diamond2. Stages of the creativity process1. Discovery phase (diverge)2. Definition phase (converge)3. Development phase (diverge)4. Delivery phase (converge)3 Creativity techniques for each phase

## LEARNING RESOURCES AND BIBLIOGRAPHY

| Learning resources | Bibliography |
|---|---|
| [!] *Apuntes de la asignatura* | Byttebier, I., & Vullings, R. (2007). Creativity today: tools for a creative attitude; for business, education, industry, training, development, government, consultants, workers, thinkers, meetings... BIS Publishers |
| [!] *Consultas en páginas web relacionadas con el tema* | |
| [!] *Plataforma Moodle* | Design Council. (2014). Leading Business by Design. Why and how business leaders invest in design. |
| [!] *Presentaciones en clase* | Stickdorn, M. (2021). This is service design doing: Applying service design thinking in the real world: A practitioner's handbook. O'Reilly |
| | Design Council. (2015). Introducing Design Methods. Retrieved from h ttps://www.designcouncil.org.uk/sites/default/files/asset/document/Des ignCouncil_Design%20methods%20for%20developing%20services.p df |
| | http://katalogoa.mondragon.edu/janium-bin/janium_login_opac_re_ln k. pl?grupo=ORGINDUSTRIAL32&ejecuta=15&_ST |