

[GBF201] CHEMISTRY

GENERAL INFORMATION

Studies	DEGREE IN BIOMEDICAL ENGINEERING		Subject	CHEMISTRY
Semester	1	Course	1	Mention / Field of specialisation
Character	BASIC TRAINING		Language	EUSKARA
Plan	2022	Modality	Face-to-face	Total hours
Credits	6	Hours/week	5.22	94 class hours + 56 non-class hours = 150 total hours

2030 AGENDA GOALS



PROFESSORS

BURUAGA LAMARAIN, LOREA

REQUIRED PREVIOUS KNOWLEDGE

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

LEARNING RESULTS

LEARNING RESULTS	KC	SK	AB	ECTS
G-RA08 - To understand and apply the principles of basic knowledge of general chemistry, organic and inorganic chemistry and their applications in engineering		x		5,4
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		0,36
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		0,24
Total:				6

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

SECONDARY LEARNING RESULTS

1RGB190 (1 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	2 h.	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

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems
Observation (technical capacity, attitude and participation)

CH - Class hours: 2 h.

NCH - Non-class hours: 1 h.

TH - Total hours: 3 h.

RGB116 [!] *Identifica y desarrolla las reacciones químicas que ocurren en diferentes situaciones de 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 individually and/or in teams	9 h.	6 h.	15 h.

Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning		10 h.	10 h.
Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects	35 h.	10 h.	45 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

20%

(No mechanisms)

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

65%

Self-assessment

15%

CH - Class hours: 44 h.

NCH - Non-class hours: 26 h.

TH - Total hours: 70 h.

1RGB193 (1 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

2 h.

1 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%

Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems
Observation (technical capacity, attitude and participation)

CH - Class hours: 2 h.

NCH - Non-class hours: 1 h.

TH - Total hours: 3 h.

RGB115 [!] *Conoce las características de los materiales que tienen una situación física diferente partiendo de las características atómicas*

LEARNING ACTIVITIES

CH

NCH

TH

Personal study and flexible development of concepts and subjects using active dynamics, to foster more meaningful learning

10 h.

10 h.

Presentation by the teacher in the classroom, in participatory classes, of concepts and procedures associated with the subjects

40 h.

15 h.

55 h.

EVALUATION SYSTEM

W

MAKE-UP MECHANISMS

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

85%

(No mechanisms)

Self-assessment

15%

CH - Class hours: 40 h.

NCH - Non-class hours: 25 h.

TH - Total hours: 65 h.

1RGB192 (1 sem)

LEARNING ACTIVITIES	CH	NCH	TH
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 h.	1 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: 2 h. NCH - Non-class hours: 1 h. TH - Total hours: 3 h.			

1RGB191 (1 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	2 h.	1 h.	3 h.
EVALUATION SYSTEM	W	MAKE-UP MECHANISMS	
Self-assessment	25%	Reports on the completion of exercises, case studies, computer exercises, simulation exercises, laboratory exercises, term projects, challenges and problems	
Co-assessment	25%	Observation (technical capacity, attitude and participation)	
Observation (technical capacity, attitude and participation)	50%		
CH - Class hours: 2 h. NCH - Non-class hours: 1 h. TH - Total hours: 3 h.			

1RGB194 (1 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	2 h.	1 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%	Observation (technical capacity, attitude and participation)	
CH - Class hours: 2 h. NCH - Non-class hours: 1 h. TH - Total hours: 3 h.			

CONTENTS

[!]

1. Modelo atómico y características periódicas

2. Conceptos básicos de los enlaces químicos

3. estados de la materia: líquido y gas

4. Conceptos básicos de las reacciones químicas

5. Reacciones ácido base

6. Termoquímica

7. Electroquímica

LEARNING RESOURCES AND BIBLIOGRAPHY

Learning resources

- [!] *Presentaciones en clase*
- [!] *Proyección de videos*
- [!] *Consultas en páginas web relacionadas con el tema*
- [!] *Plataforma Moodle*
- [!] *Realización de prácticas en laboratorio*

Bibliography

- Química la ciencia central, 11a edición. Theodore L. Brown, H. Eugene LeMay, Bruce E. Bursten, Catherine J. Murphy. Editorial Pearson (2009)
- Química general, 10a edición. Ralph H. Petrucci, F Geoffrey Herring, Jeffry D. Madura, Carey Bissonnette. Editorial Pearson (2011)
- Kimikaren Oinarriak, Teresa Arbeola Lopez (2010)
- Kimika Orokorra, 2. argitalpena, UEUko Kimika Saila (1996)