Universitat Autònoma de Barcelona

Chemistry in Industry 2016/2017

Code: 42426
ECTS Credits: 15

Degree	Type	Year	Semester
4313385 Industrial Chemistry and Introduction to Chemical Research	OT	0	1

Contact

Name: José Peral Pérez
Email: Jose.Peral@uab.cat

Use of languages

Principal working language: english (eng)

Teachers

Joan Carles Bayón Rueda
Jordi Marquet Cortés
Rosa Maria Ortuño Mingarro
Manuel Valiente Malmagro
Manel del Valle Zafra
Joan Pau Bayón Rueda
Pau Ferrer Alegre
Juan Sangüesa
Juan Antonio Baeza Labat
Gonzalo Guirado López
Albert Guisasola Canudas
Sergio Ponsa Salas

Prerequisites

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Objectives and Contextualisation

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Skills

- Correctly apply new information capture and organisation technologies to solve problems in professional activity.
- Correctly evaluate the risks and environmental and socio-economic impact associated to special chemical substances.
- Define specialised concepts, principles, theories and facts in the different areas of Chemistry.
- Design processes that imply the treatment or elimination of dangerous chemical products.
- Evaluate responsibility in the management of information and knowledge in the field of Industrial Chemistry and Chemical Research.

- Evaluate the human, economic, legal and ethical dimension of professional practice, as well as the environmental implications of one's work.
- Foster innovation and entrepreneurship in chemical industry and research.
- Innovate in the spaces and environments of the field of work, showing initiative and an entrepreneurial spirit.
- Possess and understand knowledge that provides a basis or opportunity for originality in the development and/or application of ideas, often in a research context
- Propose alternatives for the solving of complex chemical problems in different chemical specialities.
- Student should possess an ability to learn that enables them to continue studying in a manner which is largely self-supervised or independent
- Students should know how to communicate their conclusions, knowledge and final reasoning that they hold in front of specialist and non-specialist audiences clearly and unambiguously
- Use scientific terminology in the English language to defend experimental results in the context of the chemistry profession.

Learning outcomes

1. Correctly apply new information capture and organisation technologies to solve problems in professional activity.
2. Describe and analyse monographic themes of chemical products of major industrial relevance.
3. Describe the different types of sustainable energy and its applications
4. Evaluate responsibility in the management of information and knowledge in the field of Industrial Chemistry and Chemical Research.
5. Evaluate risks related with industrial products.
6. Evaluate the human, economic, legal and ethical dimension of professional practice, as well as the environmental implications of one's work.
7. Explain waste treatment procedures.
8. Identify technological applications based on biological systems and living organisms for the creation and modification of products or processes.
9. Innovate in the spaces and environments of the field of work, showing initiative and an entrepreneurial spirit.
10. Manage projects, evaluate production costs and demonstrate entrepreneurial activity.
11. Possess and understand knowledge that provides a basis or opportunity for originality in the development and/or application of ideas, often in a research context
12. Student should possess an ability to learn that enables them to continue studying in a manner which is largely self-supervised or independent
13. Students should know how to communicate their conclusions, knowledge and final reasoning that they hold in front of specialist and non-specialist audiences clearly and unambiguously
14. Use scientific terminology in the English language to defend experimental results in the context of the chemistry profession.

Content

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Methodology

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Activities

Title	Hours	ECTS	Learning outcomes
Type: Directed			

XXX	20	0.8	2, 10, 14
XXX	30	1.2	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
XXX	100	4	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
XXX	170	6.8	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Evaluation

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Evaluation activities

Title	Weighting	Hours	ECTS	Learning outcomes
XXX	XXX	30	1.2	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
YYY	YYY	10	0.4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
ZZZ	ZZZ	15	0.6	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Bibliography

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