

Información del Plan Docente

Academic Year	2016/17
Academic center	100 - Facultad de Ciencias
Degree	452 - Degree in Chemistry
ECTS	3.0
Course	2
Period	Second semester
Subject Type	Optional
Module	---

1.Basic info**1.1.Recommendations to take this course****1.2.Activities and key dates for the course****2.Initiation****2.1.Learning outcomes that define the subject****2.2.Introduction****3.Context and competences****3.1.Goals****3.2.Context and meaning of the subject in the degree****3.3.Competences****3.4.Importance of learning outcomes****4.Evaluation****5.Activities and resources****5.1.General methodological presentation****5.2.Learning activities****5.3.Program****I. Science in the Ancient and Medieval World**

1. The Origins of Rational Science: Technology and Philosophy
2. Materialism and Idealism

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3. Ancient Knowledge of Matter: Alchemy, Technology, Medicine

II. The Birth of Modern Science

1. Scientific Revolution, Protestant Reformation and Early Capitalism
2. Pneumatic Chemistry (Hales, Black, Cavendish, Priestley, Scheele)

III. Science and Industry (19th-20th centuries)

1. Heat and Power
2. Engineering and Metallurgy
3. Electricity and Magnetism
4. Chemistry
5. Biology

5.4.Planning and scheduling

5.5.Bibliography and recommended resources

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|-----------|--|
| BB | Bernal, John D.. Historia social de la ciencia. Vol.1, La ciencia en la historia / John D. Bernal ; traducción de Juan Ramón Capella . - 6ª ed. Barcelona : Península, 1989 |
| BB | Bernal, John D.. Historia social de la ciencia. Vol.2, La ciencia de nuestro tiempo / John D. Bernal ; traducción de Juan Ramón Capella . - 6ª ed. Barcelona : Península, 1991 |
| BB | Companion to the history of modern science / edited by R.C. Olby ... [et al.] London and New York : Routledge, cop. 1990 |
| BB | Ihde, Aaron J.. The development of modern chemistry / Aaron J. Ihde New York : Dover, cop. 1984 |
| BB | Inkster, Ian. Science and technology in history : an approach to industrial development / Ian Inkster New Brunswick, New Jersey : Rutgers University Press, 1991 |
| BC | Bensaude-Vincent, Bernadette. A history of chemistry / Bernadette Bensaude-Vincent and Isabelle Stengers ; translated by Deborah van Dam Cambridge [etc.] : Harvard University Press, 1996 |

27224 - History of Science

BC

Bensaude-Vincent, Bernadette. Historia de la química / Bernardette Bensaude-Vincent, Isabelle Stengers ; versión en español de Encarnación Hidalgo Madrid ; Universidad Autónoma de Madrid ; Wilmington, Delaware : Addison Wesley, D.L.1997