

- Course title: **General Chemistry I.**
- Course code: 5265
- Type of course: compulsory
- Level of course: basic
- Year of study: 1
- Semester: 1
- Number of credits allocated: 9
- Names of lecturers: Rafael Aguado, María José Rojo and María García.
- Objective of the course: describe and properly apply atomic structural models; recognize and interpret various types of bonds in organic and inorganic compounds; define and develop organic and inorganic compound structures; relate microscopic structure to the macroscopic properties of matter; propose and draw all the stereoisomers of a given molecular structure.
- Prerequisites: no prior requirements.
- Course contents:
  - Formulation and classification of organic and inorganic compounds.
  - Atomic structural models.
  - Theories on bond and bonding in condensed phases.
  - Basic concepts of chemical reactivity
  - Structure of organic compounds. Study of the main functional groups of organic compounds.
  - Stereochemistry in organic compounds.
- Recommended reading:
  - Douglas, B.; McDaniel, D.; Alexander, J., “*Concepts and Models of Inorganic Chemistry*”, 3<sup>rd</sup> Ed., John Wiley & Sons, 1994. Spanish translation of the 2<sup>nd</sup> Ed. “*Conceptos y Modelos en Química Inorgánica*”, Reverté, 1987, reprinted 1994.
  - Housecroft, C. E.; Sharpe, A. G., “*Inorganic Chemistry*”, 3<sup>rd</sup> Ed., Pearson Prentice Hall, 2008. Spanish translation of 2<sup>nd</sup> Ed. “*Química Inorgánica*”, Pearson Prentice Hall, 2006.
  - Huheey, J. E., Keiter, R. L., Keiter, E. A., “*Inorganic Chemistry: Principles of Structure and Reactivity*”, 4<sup>th</sup> Ed., Harper Collins, 1993. Spanish translation of the 4<sup>th</sup> Ed. “*Química Inorgánica. Principios de Estructura y Reactividad*”, Oxford University Press, 1997.
  - García Pérez, J. M.; Serna Arenas, F. and García García, F.. *Fundamentos de Química Orgánica. Estructura y propiedades de los compuestos orgánicos.* Universidad de Burgos, 2008.
  - Organic Chemistry, *VOLLHARDT, K. P. C and SCHORE, N.E.*, 5<sup>th</sup> Ed., 2007, W. H. Freeman Company, New York
  - Organic Chemistry, *BRUCE, P. Y.*, 5<sup>th</sup> Ed., 2007, Pearson Prentice Hall, Upper Saddle River
- Teaching methods:
  - Lectures: teachers explain the contents of the lessons.
  - Seminars: students and teacher discuss the problems and other points raised in class.
- Assessment methods:
  - Resolution of problems, issues and other proposals: 30%
  - Participation and attitude in lectures and seminars: 10%
  - Written work and exams: 60%.
- Language of instruction: Spanish and/or English