

- Course title: **Inorganic Chemistry III.**
- Course code: 5290
- Type of course: compulsory
- Level of course: fundamental
- Year of study: 3
- Semester: 2
- Number of credits allocated: 3
- Names of lecturers: Asunción Muñoz and Gustavo Espino.
- Objective of the course:
 - To define and to identify those elements in the periodic table belonging to blocks d and f.
 - To explain the main properties of these elements and their systematic variation throughout the periodic table.
 - To describe the main extraction and purification processes for the elements in blocks d and f, as well as their reactivity and applications.
 - To cite the leading compounds of the elements in blocks d and f, and to describe their extraction methods, as well as their structure, properties, reactivity and applications.
 - To establish correlations between structure, properties, reactivity and applications for the elements in blocks d and f and their compounds.
 - To rationalize in a systematic way physical properties and chemical tendencies throughout blocks d and f.
- Prerequisites: It is recommended that students should have attended Inorganic Chemistry I and Inorganic Chemistry II before following this course.
- Course contents: introduction to the chemistry of transition elements; group 4 elements: Ti, Zr y Hf; group 5 elements: V, Nb y Ta; group 6 elements: Cr, Mo y W; group 7 elements: Mn, Tc and Re; group 8 elements: Fe, Ru and Os; group 9 elements: Co, Rh and Ir; group 10 elements: Ni, Pd and Pt; group 11 elements: Cu, Ag and Au; group 3 elements: Sc, Y, La and Ac, Lantanides and Actinides.
- Recommended reading:
 - Greenwood N.N.; Earnshaw A., "Chemistry of the Elements". 2nd Ed. Butterworth/Heinemann.1997.
 - Cotton F.A.; Wilkinson G., "Advanced Inorganic Chemistry". 6th Ed. John Wiley and Sons. 1999.
 - Holleman-Wiberg., "Inorganic Chemistry". Academic Press-Walter de Gruyter. 1st English Ed. 2001.
 - C. E. Housecroft; A. G. Sharpe. Inorganic Chemistry. 3rd Ed. 2008. Prentice Hall.
 - Shriver and Atkins. Inorganic Chemistry. 4th Ed.. 2006. Oxford University Press.
 - Purcell K.F.; Kotz J.C., Química Inorgánica. Reverté. 1979.
- 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:
 - Continuous evaluation of the theoretical sessions: 20%
 - Analysis, presentation and discussion of problems, issues and other proposals: 20%
 - Participation and attitude in lectures and seminars: 10%
 - Written work and exams: 50%
- Language of instruction: Spanish and/or English