

**Información del Plan Docente**

Academic Year	2016/17
Academic center	100 - Facultad de Ciencias
Degree	452 - Degree in Chemistry
ECTS	12.0
Course	3
Period	Annual
Subject Type	Compulsory
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**

Lesson 1: Introduction to Instrumental Analysis

Lesson 2: Basic Concepts of Chromatography

Lesson 3: Gas Chromatography

Lesson 4: High Performance Liquid Chromatography

Lesson 5: Mass Spectrometry as detection technique in Chromatography. HPLC-MS and GC-MS

Lesson 6: Introduction to spectrometric techniques

Lesson 7: Introduction to Atomic Spectrometry.

Lesson 8: Atomic Absorption Spectrometry

Lesson 9: Atomic Emission Spectrometry: Flame, Arc and Spark, Plasma

Lesson 10: Inductively Coupled Plasma-Mass Spectrometry

Lesson 11: Molecular Absorption Spectrometry: UV-VIS and Infrared

Lesson 12: Molecular Luminiscence : Fluorescence and Chemiluminiscence

#### **5.4. Planning and scheduling**

#### **5.5. Bibliography and recommended resources**

**BB** See information and resources incorporated in the ADD

**BB** Skoog, Douglas A.. Principios de análisis instrumental / Douglas A. Skoog, F. James Holler, Stanley R. Crouch ; traductor, María Bruna Josefina Anzures ; revisión técnica Francisco Rojo Callejas, Juan Alejo Pérez Legorreta . - 6<sup>a</sup> ed. México, D. F. : Cengage Learning, cop. 2008