## Level: Master

Course title: Introduction to Plasma Tecnology

#### Status: elective

ECTS: 9

**Requirements**: Basic electronics, Ionized Gases

### Learning objectives

To familiarize students with the application of plasma in technology and industry

# Learning outcomes

After completion of learning content and course students should have developed:

General skills: Ability to work within a professional technology applied to the scientific and industrial level. Course-specific skills: Ability to independently perform experiments, their description and documentation. The ability to apply different plasma sources in technological and industrial processes.

### **Syllabus**

Theoretical instruction

Surface treatment by plsamas. The interaction of ions with the solid state. Plasma deposition of thin films. Plasma etching in microelectronics. Material processing by plasma. Plasma chemistry. Plasma light sources. Practical teaching exercises

### Practical instructions

Computational exercises accompany the lectures. Experimental exercises: Electrical characteristics of pulsed plasma source. The spectral characteristics of pulsed plasma source. The spectral characteristics of the glow discharge. Metallization of glass in the glow discharge.

Seminar: It consists in preparing the experimental exercises and process the results in the form of a seminar paper that defends every week.

Weekly teaching load				Other:
Lectures:	Exercises:	Other forms of teaching:	Student research:	
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