Advanced Materials for Fusion

Curso Académico: (2019 / 2020) **Fecha de revisión: 05-05-2020**

Departamento asignado a la asignatura:

Coordinador/a: LEGUEY GALAN, TERESA

Tipo: Optativa Créditos ECTS : 3.0

Curso : 2 Cuatrimestre :

REQUISITOS (ASIGNATURAS O MATERIAS CUYO CONOCIMIENTO SE PRESUPONE)

Basic knowledge of Atomic Physics, Electrodynamics, Material Science and Solid State Physics (graduate level).

DESCRIPCIÓN DE CONTENIDOS: PROGRAMA

1. Structural Materials requirements for Fusion Reactors
2. Basic concepts from Materials Science
3. Principles of Radiation Damage (RD)
4. Effects of RD on Microstructure
5. Modelling RD: The SRIM code
6. Particular Effects of Ion irradiation
7. Effects of RD on Mechanical Properties
8. Ferritic/Martensitic and Ferritic steels
9. Oxide Dispersion Strengthened (ODS) Steels
10. Tungsten alloys , Vanadium alloys and other relevant materials

ACTIVIDADES FORMATIVAS, METODOLOGÍA A UTILIZAR Y RÉGIMEN DE TUTORÍAS

Classroom lectures plus post-lecture assignments.

SISTEMA DE EVALUACIÓN

Evaluation shall take into account attendance, class participation, homework assignments and the mark obtained by the student in a questionnaire at the end of the course.

Peso porcentual del Examen Final:	70
Peso porcentual del resto de la evaluación:	30