CÓDE	NAME OF MODULE	TYPE
	INTRODUCTION TO SCIENTIFIC RESEARCH	E

M = mandatory
E = elective

3.3.1. Learning goals of the module.

(List the specific learning goals that the current module should provide to the student; goals can focus on content, skills, or attitudes.)

THE GOAL OF THIS COURSE IS TO INTRODUCE THE STUDENT INTO THE PROTOCOLS OF THE SCIENTIFIC RESEARCH, EITHER THEORETICAL OR EXPERIMENTAL, BY DEVELOPING A SHORT TERM RESEARCH PROGRAM UNDER THE GUIANCE OF AND SPECILIST IN THE FIELD.

3.3.2. Methodology: learning activities and credit value of the module (ECTS).

3.3.2.1. Learning activities.

(Time required to teach the module; links to other modules included in the MSc Program and suggested chronological sequence with the latter)

THIS MODULE IS PLANNED FOR TWO MONTH WITH 9 ECTS WITH 90 PRACTICAL HOURS (UNDER THE GUINACE OF THE SPECIALIST) AND 135 PERSONAL WORK HOURS. AS A FINAL PART, THE STUDENT HAVE TO PREPARE A REPORT OF THE ACTIVITY

3.3.2.2. ECTS credit value (and time)

1 ECTS credit = 25 hours UPV/EHU

TYPE OF LECTURE[1]	Theory		Practice							Evaluation	
	M[2]	S	PA	PL	PO	TA	TAI	PCL	PCC	Periodic Grading	Final Grading
Classroom lectures				90							9
Personal work [3]				135							
TOTAL				225							9

(1) M (standard lecture); S (seminar); PA (practical exercises in classroom); PL (practical exercises in laboratory); PO (practical exercises with computers); TA (non-industrial workshops); TAI (industrial workshops); PCL (clinical practice); PCC (field practice); the acronyms are taken from the Spanish wording.

(2) M = maximum allowed is 60% of the full classroom lectures .

(3) Personal work = time that the student would use to prepare and develop individual and group assignments.

3.3.2.3. Module Program.

Introduction to the research work by participating on the ongoing activities in one of the topics listed below:

Topic 1	THEORY AND MODELING OF NANOSTRUCTURES AND LOW-DIMENSIONAL SYSTEMS.
Topic 2	EXPERIMENTAL CHARACTERIZATION OF NANOSCOPIC SYSTEMS.
Topic 3	NANOSTRUCTURED POLYMERIC MATERIALS.
Topic 4	THEORETICAL SPECTROSCOPY OF NANO AND BIO STRUCTURES.
Topic 5	PHOTONIC NANOMATERIALS.
Topic 6	MAGNETISM OF MICRO/NANO-CRYSTALLINE MATERIALS.
Topic 7	NANOMAGNETISM.

3.3.2.4. Bibliography.

(Basic and specialized bibliographies, journal references, internet addresses, etc.)

TO BE SPECIFIED BY THE SPECIALIST SUPERVISING THE STUDENT RESEARCH ACTIVITY

3.3.3. Criteria and methods for evaluation and grading

(Analysis of the methodology that will be used to evaluate the learning process of the student)

The evaluation will be continuous according with the ability of the student to develop the project 70% and 30% based on the quality of the written report.

3.3.4. Learning resources

The student will have free access to the libraries and laboratories of the Facultad de Química of the UPV/EHU, the Centro de Física de Materiales (Centro Mixto CSIC-UPV/EHU) and to the existing computer resources.

3.3.5. Language and number of groups attending the module

1	NUMBER OF GROUPS
x	LANGUAGE: ENGLISH

3.3.6. Fields of science and technology to which the module is related

CODE	FIELD
	PHYSICS OF CONDENSED MATTER
	APPLIED PHYSICS

3.3.7. Department in charge of the Program

CODE	DEPARTMENT (1)
	DEPARTMENT OF MATERIALS PHYSICS

3.3.8. Teachers in charge of the module

DNI	Teacher UPV/EHU	Number of credits

DNI	Teacher other institutions	Number of credits