

Course guide 2301221 - SMIAR - Seminars on Microelectronic Industry and Advanced Research

Last modified: 29/05/2025

Academic year: 2025	ECTS Credits: 2.0	Languages: English	
Degree:	MASTER'S DEGREE IN SEMICONDUCTOR ENGINEERING AND MICROELECTRONIC DESIGN (Syllabus 2024). (Compulsory subject).		
Teaching unit:	230 - ETSETB - Barcelona School of Telecommunications Engineering.		
Unit in charge:	Barcelona School of Teleo	communications Engineering	

LECTURER				
Coordinating lecturer:	XAVIER ARAGONES CERVERA			
Others:	Segon quadrimestre: XAVIER ARAGONES CERVERA - 10 NURIA BARNIOL BEUMALA - 10			

LEARNING RESULTS

Knowledges:

KT02. Describe the current state of scientific research and microelectronic industrial technology worldwide and their economic, social and environmental impact.

KT03. Describe the physical principles underlying current semiconductor devices in relation to their application, as well as their emerging trends, modelling and characterisation techniques.

KT07. Identify gender stereotypes and roles and how they may impact professional practice.

Skills:

ST01. Design integrated devices, circuits and systems for new products according to their applications, taking into account sustainability and energy efficiency requirements.

ST02. Apply the manufacturing techniques and processes and design, simulation and characterisation tools of semiconductor engineering and microelectronic design to provide a solution to a specific integrated system proposal.

ST03. Critically analyse the principles, values and procedures that govern the practice of the profession.

ST06. Plan the different activities involved in successfully carrying out an assigned task within a team, managing time and resources appropriately.

ST07. Work as part of a heterogeneous team that includes supervisors and specialist and non-specialist members.

Competences:

CT02. Apply sustainability criteria to projects based on integrated microelectronic products.

CT03. Apply the processes of semiconductor engineering and microelectronic design to fields in diverse areas of science or engineering where integrated systems are required.

CT04. Generate questions and hypotheses, propose methodologies to address new research and innovation challenges, and demonstrate originality in approaching and solving problems requiring integrated solutions in microelectronic technologies.

TEACHING METHODOLOGY

Presentations of complementary topics, by recognised industry and academic experts.

LEARNING OBJECTIVES OF THE SUBJECT

The objective of the Seminars, that will be open exposition of complementary topics given by experts is to allow the student to contact with personal extern to the master with deep experience in the topic of the seminar.



STUDY LOAD

Туре	Hours	Percentage
Self study	35,0	70.00
Hours large group	15,0	30.00

Total learning time: 50 h

CONTENTS

title enSeminar on a complementary subjecto to the màster.

Description:

Will allow the students to follow different seminars on topics complementary to the Master, delivered by experts, external to the Master.

Full-or-part-time: 50h Theory classes: 15h Self study : 35h

GRADING SYSTEM

Attendance (65%) Tests (35%)

RESOURCES

Other resources:

Specific resources will be defined in each seminar.