UNIVERSITÀ DI PAVIA

Anno Accademico 2021/2022

INDUSTRIAL TOPICS IN MICROELECTRONICS AND PHOTONICS

Enrollment year	2020/2021
Academic year	2021/2022
Regulations	DM270
Academic discipline	ING-INF/01 (ELECTRONICS)
Department	DEPARTMENT OF ELECTRICAL,COMPUTER AND BIOMEDICAL ENGINEERING
Course	ELECTRONIC ENGINEERING
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	Annual (27/09/2021 - 17/06/2022)
ECTS	3
Lesson hours	32 lesson hours
Language	English
Activity type	ORAL TEST
Teacher	GIULIANI GUIDO (titolare) - 1 ECTS MANSTRETTA DANILO - 2 ECTS
Prerequisites	The course completes the training of electronic engineers specializing in microelectronics. Attendance of courses related to microelectronics is a recommended prerequisite.
Learning outcomes	The course has two main objectives. First and foremost, it wants to provide the students an introduction to the industrial reality that exists near the University of Pavia in the area of Microelectronics. This is done through a series of seminars held by Design Managers of several Multinational Semiconductor Companies that have established themselves in the Pavia/Milano area. The goal is to present the Company profile and explain the opportunity offered to the students and expectations the company has toward them. The second objective is to present some advanced topics in Microelectronics emphasizing the

	practical designer approach that is typical of the industrial environment. This is done through a series of seminars given by the instructor.
Course contents	The course includes seminars from industrial managers and lectures from the instructor on advanced topics of relevance for industry. Seminars from industrial Managers Two hours seminars from Design Managers will be offered from e.g. the following companies: Huawey, TI, Maxim, AMS, STM, Infineon, Micron Lectures by the instructor Review, with an intuitive explanation, of the behavior o the MOS transistor including relevant second order effects and figures of merit, with emphasis on the designer prospective. Application to intuitive design of CMOS amplifiers Advanced topics on circuits and systems for frequency synthesis and clock generation. Seminars on research topics in the area of microelectronics, with examples of achievements from PhD students of the research labs of University of Pavia.
Teaching methods	Lectures organized as seminars, either from the instructor or invited speakers.
Reccomended or required readings	The adopted material is written in English and is made up of slides prepared by the instructor and provided by the invited speakers
Assessment methods	The exam consist in the evaluation of a report on one of the topics presented to the students and questions on the topics presented by the instructor.
Further information	=
Sustainable development goals - Agenda 2030	$lbl_legenda_sviluppo_sostenibile