



INDUSTRIAL TOPICS IN MICROELECTRONICS AND PHOTONICS

Anno immatricolazione	2020/2021
Anno offerta	2021/2022
Normativa	DM270
SSD	ING-INF/01 (ELETTRONICA)
Dipartimento	DIPARTIMENTO DI INGEGNERIA INDUSTRIALE E DELL'INFORMAZIONE
Corso di studio	ELECTRONIC ENGINEERING
Curriculum	PERCORSO COMUNE
Anno di corso	2°
Periodo didattico	Annualità Singola (27/09/2021 - 17/06/2022)
Crediti	3
Ore	32 ore di attività frontale
Lingua insegnamento	English
Tipo esame	ORALE
Docente	GIULIANI GUIDO (titolare) - 1 CFU MANSTRETTA DANILO - 2 CFU
Prerequisiti	The course completes the training of electronic engineers specializing in microelectronics. Attendance of courses related to microelectronics is a recommended prerequisite.
Obiettivi formativi	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.
Programma e contenuti	<p>The course includes seminars from industrial managers and lectures from the instructor on advanced topics of relevance for industry.</p> <p>Seminars from industrial Managers Two hours seminars from Design Managers will be offered from e.g. the following companies: Huawei, TI, Maxim, AMS, STM, Infineon, Micron</p> <p>Lectures by the instructor Review, with an intuitive explanation, of the behavior of the MOS transistor including relevant second order effects and figures of merit, with emphasis on the designer perspective. 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.</p>
Metodi didattici	Lectures organized as seminars, either from the instructor or invited speakers.
Testi di riferimento	The adopted material is written in English and is made up of slides prepared by the instructor and provided by the invited speakers
Modalità verifica apprendimento	The exam consists in the evaluation of a report on one of the topics presented to the students and questions on the topics presented by the instructor.
Altre informazioni	=
Obiettivi Agenda 2030 per lo sviluppo sostenibile	\$Ibl legenda sviluppo sostenibile